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ABSTRACT

This guide for parents of gifted children in Texas is intended to provide general information and sources of additional help. Section 1 examines the meaning of being gifted and talented and provides the Texas definition of giftedness, lists of characteristics and concomitant problems of gifted and talented children, and a discussion of the highly gifted. Section 2 specifically addresses the parent's role, including common parental concerns, parent advocacy, how to start a parent group, and communicating with the school. The third section looks at the role of the school. This section provides brief histories of the Texas Association for the Gifted and Talented (TAGT) and gifted education in general, a description of gifted/talented program models and options (noting that special grouping is recommended by the TAGT), a discussion of the "labeling" issue, an outline of gifted identification processes, and a summary of the state mandate and structure of Texas gifted education. The final section lists resources, including services available through TAGT, four organizational resources, a glossary of "educationese" terminology, and an annotated bibliography containing 116 references. (DB)

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Raising Champions:

A Parents' Guide for Nurturing Their Gifted Children

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SECTION I: WHAT DOES BEING GIFTED AND TALENTED MEAN?

You suspect that your child may be gifted or talented and you want to know more about what these terms mean. Unfortunately, there is no single definition for the terms gifted or talented that is recognized by all school districts, educators, or even experts in the field. This may make it hard for you to determine whether the behaviors you see in your child are characteristic of gifted and talented children. As you read and talk to people, you will find that the terms gifted and talented are often used synonymously. For others, gifted refers to individuals with very high abilities in academic areas and talent to those with high ability in the arts, music, or drama. Some people refer to individuals who are very able in many areas as gifted. They call people talented who are good in a single area. Some educators distinguish between gifted and talented by looking at test scores. Students with scores in the top five or ten percent are called gifted. Those whose scores are above average but lower than the top are deemed talented. In this parent guide we will use the terms interchangeably.

DEFINITIONS

A little background information may help you better understand giftedness and talent. In 1972 the U.S. Department of Education (USOE) adopted a heuristic (a heuristic is a model to help us understand something) that encompassed many possible variations of giftedness or talent. This explanation of giftedness was included in a Congressional report by the Secretary for Education, Sidney P. Marland, and called the Marland Report[1]. Seven areas were mentioned where individuals might show their potential for giftedness:

> *Gifted and talented children are those...who by virtue of outstanding abilities are capable of high performance. These children...require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their (potential contribution to self and society).*

Children capable of high performance include those who have demonstrated any of the following abilities or aptitudes, singly or in combination:

- general intellectual ability
- creative or productive thinking
- visual and performing arts aptitude
- specific academic aptitude
- leadership ability

HOW DOES THE STATE OF TEXAS DEFINE GIFTEDNESS AND TALENT?

The definition of gifted and talented students used in Texas[2] is based on the Marland Report. It is broad and allows individual schools much latitude in specifying what is meant by giftedness and talent in their district. The definition follows:

> *"Gifted and talented student" means a student who by virtue of outstanding mental abilities is capable of high performance. The student may demonstrate, singly or in combination, above-average achievement or potential in such areas as general intellectual ability, specific subject matter aptitude, ability in creative*

[1] Marland, S.P., Jr. (1971). *Education of the gifted and talented* (2 vols.) Washington, DC: U.S. Government Printing Office.

[2] If you are interested in reading the complete wording of the Texas definition, see Texas Education Code §21.651.

and productive thinking, and leadership ability. The phrase does not include students who demonstrate above-average achievement or potential in areas relating to physical abilities[3].

WHAT DOES MY LOCAL SCHOOL MEAN BY GIFTED AND TALENTED?

That is a hard question to answer without knowing the district in which your child is enrolled. Many schools try to serve students with general intellectual ability or specific academic talent. Ask your child's classroom teacher, principal, or gifted and talented teacher or coordinator for the definition used in your school system. Request a written copy of the definition; all districts in Texas are required to have such a document.

You should be aware that the definition of gifted and talented students can vary widely from school district to school district. It is possible for a child to be identified for gifted and talented programs in one district and not in another. This happens when districts define gifted and talented differently. Not being identified by your child's school does not necessarily mean that the child is not gifted or talented in some important way. Often the identification procedures used by schools select the child who is an overall good student. Students with specific abilities and talents, such as dance, art, math, leadership, science, creative, or writing ability/talent, may not always be selected for such programs.

CHARACTERISTICS OF GIFTED AND TALENTED CHILDREN

A brief list of commonly noted traits includes[4]:

- Very verbal, asks many questions, uses advanced vocabulary, wants to know why, how, and what about many things (or everything). (May surprise you, your friends, or family with the questions asked or the words used.)
- Imaginative, playful, may have an imaginary playmate, daydreams, becomes absorbed in inner thoughts.
- Good memory, learns rapidly, retains knowledge for long periods of time.
- Has interests in a wide range of topics, wants to know everything about a chosen interest.
- Acutely aware of right and wrong, sensitive to others feelings, strong sense of fairness.
- Critical of others, but has difficulty accepting criticism, may demand unrealistic perfection from self, especially in certain areas.
- Displays boundless energy, requires less sleep, is always in motion.

Still not sure if your child has gifted or talented traits? An interesting list, developed for the Denton, Texas school district[5], may help you recognize giftedness and talent in your child. Would you say your child:

- Has quick recall of information. (e.g., immediately remembers facts, series of numbers, events, words from songs or movies, or parts of conversations heard earlier)
- Knows a lot more about some topics than do other children that age. (e.g., recounts facts about dinosaurs, sports, electronics, math, books, animals, music, art, etc.; finds out a lot about a particular subject on his or her own)
- Uses advanced vocabulary. (e.g. surprises older children and adults with the big words used; uses words unusual for a child, knows the correct terms, exact words, or labels for things; acts and speaks like a grow-up when talking to adults; uses simpler words when talking to peers or younger children)
- Began to read or write early. (e.g., said or could read individual words at a very young age, started to

[3]For the complete state plan and guidelines see: *The Texas State Plan and Guidelines for the Education of the Gifted/Talented.* This publication is available from the Texas Education Agency.

[4]For more complete listings of characteristics of gifted and talented children, you can read any of the following text books on gifted and talented children. These books may be available in your public library, a local university library, or from the gifted and talented teachers or coordinators in your district.

Davis, G.A., & Rimm, S.B. (1993). *Education of the gifted and talented* (third edition). Englewood Cliffs, NJ: Prentice Hall.
Clark, B. (1992). *Growing up gifted* (fourth edition). New York: Merrill (Macmillan Publishing).
Eby, J.W., & Smutny, J.F. (1990). *A thoughtful overview of gifted education.* New York: Longman.
Tannenbaum, A.J. (1983). *Gifted children: Psychological and educational perspectives.* New York: Macmillan Publishing.
Feldhusen, J.F., VanTassel-Baska, J., & Seely, K. (1989). *Excellence in educating the gifted.* Denver, CO: Love Publishing Co.

[5]For more information on the *Things My Child Has Done* scale, contact Dr. Micheal Sayler, College of Education, University of North Texas, Denton, TX 76203. The scale is available at no cost. It can be copied and used freely by schools or individuals provided the author is credited.

read before entering school, likes to write or tell stories, learned to read without being taught)
- Shows unusually intense interest and enjoyment when learning about new things. (e.g., has lots of energy and interest when learning; frequently and persistently asks how and why questions; is not satisfied with simple answers, wants to know details; loves how-to-do-it and non-fiction books)
- Understands things well enough to teach others. (e.g., teaches other children how to do things, explains things so that others can understand, explains areas of interest to adults)
- Is comfortable around adults. (e.g., spends time with and talks to adults who visit the house; likes the company of adults; enjoys talking with adults; understands adult humor and creates funny sayings or jokes adults can appreciate)
- Shows leadership abilities. (e.g., other children ask child for help; organizes games and activities for self or others, makes up the rules, and directs group activities; may be bossy)
- Is resourceful and improvises well. (e.g., puts together various household objects to make inventions or solve a problem, uses unusual objects for projects, uses objects in unusual ways, makes "something out of nothing")
- Uses imaginative methods to accomplish tasks. (e.g., makes creative shortcuts, doesn't always follow the rules, good at finding creative ways to get out of work)

THOSE TRAITS SEEM RATHER GENERAL. ARE THERE MORE SPECIFIC CHARACTERISTICS OF GIFTED CHILDREN?

We can be more specific in describing giftedness and talent in our children. Since we reviewed USOE and Texas definitions earlier, let's look at each area in the definitions for specific descriptions and characteristics of students with each of the talents. Remember, any particular child may show some but not all of the traits in an area, even if the child is talented in that area.

General Intellectual Ability

This category includes students who have above average mental abilities. The defining trait of these students is their advanced development in language and thinking. If you give these children an intelligence test or a school abilities test, they will perform much like older children. Their mental development exceeds their age or physical development.

Many, but not all of these children, begin reading early. Some start as soon as ages three or four. They surprise parents when they read words on signs, cereal boxes, or in grocery stores. Other children in this group learn to read in more traditional ways from parents, siblings, or pre-school teachers. The intellectually gifted child surprises adults with the ease and speed with which they learn. They often have a large vocabulary and can tell about favorite topics in great detail.

Intellectually gifted children are generally quicker and more logical in their thinking than other children their age. They are constantly asking questions, especially "Why?" They may not be satisfied with simple answers, but persist in asking for more information.

An important but frequently overlooked group of gifted students in this category are the highly gifted children. These children are often identified through their high scores on intelligence tests. Again, there is no clear-cut guideline for calling a child highly gifted. Linda Silverman[6] suggests that a child who scores three standard deviations above the mean on any individual test of reasoning ability is highly gifted. In terms of intelligence or school abilities tests, this is a score of 145 or higher. The special characteristics and needs of the highly gifted are discussed in more detail later in this guide.

Specific Academic Aptitude

This category includes students who are talented in certain academic areas, for example:
- mathematics,
- science,
- language arts,
- foreign languages, or
- social sciences.

[6]Linda Silverman is a noted researcher and psychologist who specializes in the highly gifted. The guideline for highly gifted children comes from: Silverman, L.K. (1989). The highly gifted. In J.F. Feldhusen, et al. *Excellence in educating the gifted.* Denver, CO: Love Publishing, pp. 71-84.

An individual might be talented in one or several of these areas. For example, your child might reason exceptionally well mathematically but be pretty much on-level in reading or writing aptitude. No child shows all of the characteristics listed below either in one talent area or across several areas. The list provides a few of the many characteristics associated with talent in each of these areas[7]:

Math Talent

Likes mathematics, learned numbers early, learns math concepts quickly, knows geometric shapes and likes to draw or rearrange them, enjoys spatial games such as tangrams or pentominoes, can solve math problems mentally, and enjoys games that involve numbers.

Science Talent

Interested in scientific topics (animals, physics, electronics, plants, weather, space, etc), has science hobbies or collections, likes gadgets, asks questions about how things work or why natural things are the way they are, and reads books and magazines on scientific or technical topics.

Language Arts Talent

Interested in words and definitions, has a large vocabulary, sees details, is a good observer, likes to write stories or poems, is creative or original in writing, reads extensively, uses vivid expressions, is motivated to read or write even when they are not given assignments, and often has a good sense of humor that is more adult-like than other children their age.

Foreign Language Talent

Learns new languages quickly, retains what is heard, has a good memory for vocabulary, produces appropriate intonation when using another language, likes languages, is curious about language and culture, and confident in using the new language.

Social Science Talent

Sensitive to social issues; reads widely on social issues from a variety of books, magazines, or newspapers; interested in social themes, complex public issues, explanations, or theories; and asks questions that are open-ended or philosophical.

Creative or Productive Thinking

This category includes students who are problem solvers, artistic, divergent thinkers, put things together, take things apart, etc. A student who is creative may not be intellectually gifted. There does seem to be a threshold level of intelligence in creative people. This means that creative individuals have above-average intelligence but higher intelligence does not insure higher creativity. Some creative people have very high intelligence, and some do not; it just doesn't seem to matter much.

Creative individuals often have high energy levels and are adventurous. They are curious and often retain a childlike sense of wonder about the world. They are playful, full of ideas, imaginative, and often enjoy pretending. They may become irritated and bored in routine or restrictive settings. Creative children are not afraid to try something new and don't mind the consequences of appearing different. These children also show traits that upset some parents, teachers, or other children. They tend to be indifferent to common conventions and courtesies, stubborn, resistant to domination, argumentative, uncooperative at times, seem capricious or cynical, egocentric, demanding, emotional, withdrawn, or overactive.

Leadership Ability

This category includes students who other children seek out for ideas of what to do. They are children that parents, teachers, or other adults pursue to lead activities, set an example, or attend activities. They often carry out well the responsibilities given them; they finish what they have promised to do. These children tend to be self-confident with agemates and with older children and adults. Often they are well liked. In groups, they cooperate, seldom bicker, and are generally easy to get along with. They tend to adapt well to new settings and situations and are not overly disturbed when routines change. As they get older, they participate in many school, church, or community activities and can be counted on to be there.

[7]For more information about behavioral characteristics associated with specific talents see:
Feldhusen, J.F., Hoover, S.M. & Sayler, M.F. (1990). *Identifying and educating gifted students at the secondary level.* Monroe, NY: Trillium Press.

Visual and Performing Arts Talent

This category includes students who have talents or abilities in music, band, voice, dance, ballet, sculpture, drawing, acting, singing, musicals, photography, etc. They enjoy the activities associated with their talent. In many ways they share the characteristics of the creative individuals listed earlier. Aptitude in visual and performing art is demonstrated through performances or the creation of products. The children dance, sing, draw, or act. They are willing to work hard in these areas. At an extreme level we have the special schools and programs for children with talents in specific areas such as ballet, violin, or acting.

CONCOMITANT PROBLEMS OF GIFTED AND TALENTED CHILDREN

Sometimes the same characteristics that make a child gifted or talented can cause problems. For example, many gifted children know a lot about certain topics. This is wonderful, but sometimes others see the child as a know-it-all or as conceited. The list on pages 7-8 provides characteristics, concomitant problems, and some suggestions.

SECTION I: WHAT DOES BEING GIFTED AND TALENTED MEAN?

CHARACTERISTICS OF GIFTED CHILDREN	CONCOMITANT PROBLEMS	INSTRUCTIONAL AND GUIDANCE SUGGESTIONS
VERBAL PROFICIENCY		
• Large vocabulary	• Inappropriate reading and resource material (especially at lower grades)	• Access to multi-level and conceptually-challenging material
• Facility of expression	• Escape into verbalism	• "Verbosity" channeled into concrete ideas and concepts
• Breadth of information	• May appear "know-it-all" and conceited to agemates	• Opportunity for interactions with intellectual peers
POWER OF ABSTRACTION		
• Interest in inductive learning and problem solving	• Resistance to drill and repetition (May have gaps in basic skills)	• Incorporate basic skills into a prerequisite for self-selected study projects
• High level of conceptualization	• May omit details	• Draw up mutually agreeable contracts that delineate important details
• Pleasure in intellectual activity	• Impatient with "busywork" assignments and uninspired teaching	• Allow student opportunity to suggest and set up alternative ways to learn concepts
INTELLECTUAL CURIOSITY		
• Interested in a wide range of things	• Stifled by a limited environment	• Early stimuli-laden intervention in barren home/school environments
• Willingness for complexity	• Bored by simplistic explanations	• Opportunity to interact with gifted, accepting adults
• Persistent pursuit of goals	• Often construed as stubbornness	• Opportunity to analyze and redirect behavior
RETENTIVENESS/ POWER OF CONCENTRATION		
• Intense attention	• Resists interruptions	• Discuss schedule realities; seek cooperation by lucid discussion
• Retains and uses information	• Frustrated by chopped-up traditional school day	• Set up blocks of time
• Long attention span	• Lack of exposure to appropriate information	• Utilize mentors and special community resources to feed hungry minds
INDEPENDENT/GOAL DIRECTED		
• Self-initiated student	• May rebel against too much direction	• Use preprogrammed materials to cover basic skills; hold student accountable for his/her contracted assignments
• Pursues individual interests	• May miss opportunities to practice essential skills of cooperative work	• Provide opportunities for student to learn and practice cooperative work skills
• Seeks own direction	• May bog down in goals beyond present attainment (perfectionism)	• Arrange for mentor-models: provide opportunity for mutual assessment against reasonable "benchmarks"

SECTION I: WHAT DOES BEING GIFTED AND TALENTED MEAN?

CHARACTERISTICS OF GIFTED CHILDREN	CONCOMITANT PROBLEMS	INSTRUCTIONAL AND GUIDANCE SUGGESTIONS
POWER OF CRITICAL THINKING		
• Self criticism	• May be too easily disillusioned by social injustices (in extreme cases, drops out or escapes in unhealthy ways)	• Give students bonafide opportunities to implement constructive suggestions for change
• Skepticism	• May lead to overly critical (negative) attitude toward others	• Utilize encounter group activities with people of diverse backgrounds
• Adept in analyzing strengths and weaknesses	• Frustration with inactivity and lack of progress	• Give opportunities for students to assume various roles in group interaction (stimulation activities)
SENSITIVITY/INTUITIVENESS		
• High level of awareness	• Possible gullibility; super sensitive to criticism, low self concept	• Ample opportunity to earn success in areas important to him/her (Gifted need as much positive reinforcement as slow learners)
• Keenly observant	• Vulnerable to peer group rejection, may compensate with behavior construed as conceited or dislike own superiority (especially true of girls)	• Opportunity to discuss unique problems with intellectual peers and understanding adults
• Emotional depth	• May lack the necessary social support and peer acceptance	• Leadership training and opportunity for value clarification with role modeling to help understand potential involvement in social responsibilities
POTENTIAL FOR CREATIVITY		
• Inventiveness	• Invention of own systems, sometimes conflicting with the norm	• Ample opportunity to invent without threat to instructors
• Liking for new ways of doing things	• Rejection of the traditional	• Opportunity to study origins of traditions – particularly from a human interest standpoint (e.g., interviews with elderly "sage" types)
• Interest in brainstorming, free-wheeling	• Lack of opportunity to take risks in a supportive environment; may lead to divergent thinking	• Opportunities to explore in simulated problem-solving environment that is psychologically safe
VERSATILITY/VIRTUOSITY		
• Diversity of interests and abilities	• May hop from one interest to another and fail to build basic competencies	• Early career guidance to build competencies in major interests
• Many hobbies	• May lack guidance in exploring and developing interests to full level of potential	• Provide flexible and individualized instruction from earliest school years
• Proficiency in art forms such as music and drawing	• Lack of early training	• Identify talent early and subsidize opportunities for early training.

Adapted from "Characteristics of Gifted Children," by Myrliss Hershey, Kansas State University, and Mary Seagoe, University of California at Los Angeles

THE HIGHLY GIFTED

The highly gifted are the children who are advanced significantly, even beyond most of the children called gifted or talented. Generally, these are children who score three or more standard deviations above the average for children their age in terms of individualized intelligence test scores (for example, on the Wechsler Intelligence Scale for Children-Revised (WISC-R), highly gifted is defined as a score of 145+; when a seventh grader takes the high-school Scholastic Aptitude Test (SAT) and has a math score of 600, she is substantially better at mathematical reasoning than many gifted students and very far ahead of her agemates).

To understand the highly gifted better and to put the differences of a child with an IQ score of 145 into perspective, let's compare him to a more average child who has an IQ of 100. There is a 45 point difference between the two children. Now compare the same average child (IQ score of 100) with a child who has an IQ 45 points lower. The lower-functioning child would have an IQ of 55. If you were the IQ 100 child, imagine the difficulty you would have in a world of people where the average IQ was 55. You would learn language much faster and easier, your vocabulary and reasoning would be greater than most adults (remember, the average IQ in our imaginary world is 55), your attention span would seem unusually long to your peers and teachers, and you could solve puzzles and problems that seemed very complex to others. On the other hand, you might feel lonely because it would be hard to find children your own age with whom you could discuss your deepest feelings; not because you felt your were superior, but because you did not want to trouble them with problems that seem so alien to them. You might become impatient at times with the slow and tedious process others use to learn or do things. Your teachers would not be able to perceive differences, make connections, see implications, or think as aptly about the moral problems associated with topics you discuss.

Similar aptitudes and problems exist for the highly gifted child. They feel out of place in a world of people who do not think the way they think. It is not that they are arrogant; they often hold their feeling inside, and are more keenly aware of the effect of their ideas or comments on others.

Parents of highly gifted children need special help. They need to meet with other parents of the highly gifted and discuss their children. Even the concerns and problems of parents of gifted and talented students do not seem quite right when they think about their own child. These parents need good information and guidance.

Stephanie Tolan[8] shares her experiences and the experiences of a friend's profoundly gifted children. She tells realistically about the joys and agonies and frustrations associated with raising such a child. A recent addition to our understanding of highly gifted is a book by Miraca Gross[9]. Her interviews and research show the harsh and unfeeling treatment given by some school personnel and the thrills felt by others who recognize and encourage the aptitudes of these children. Gross's research gives us a picture of what happens to the highly gifted when they try to be normal.

In school, where we would think the highly gifted would be in their best environment, the picture is not good. Leta Holingworth[10] noted in 1942:

> *In the ordinary elementary school situation, children of IQ 140 waste half of their time. Those above IQ 170 waste practically all their time. With little to do, how can these children develop powers of sustained effort, respect for the task, or habits of steady work? (page 299)*

[8]Stephanie Tolan is the mother of a highly gifted child, now adult, and one of the authors of *Guiding the Gifted* along with James Webb and Elizabeth Meckstroth. In chapter 13 of the book, Tolan has written a beautiful letter to parents, teachers, and others who come in contact with a highly gifted child. This is a must read for anyone who has or works with these children. Also see the annotated bibliography on the highly gifted at the end of this handbook for many more sources of information and help.

[9]Miraca Gross studies the highly gifted in Australia. She is conducting a longitudinal study of a group of these students. Her new book on the topic promises to be a classic, and it is written in an easy to understand, case study style.
Gross, M.U.M. (1993). *Exceptionally gifted children.* New York: Routledge.

[10]Leta Hollingworth is an eminent scholar in the field of gifted and talented education. Among other things, she studied very gifted children and wrote an excellent book.
Hollingworth, L.S. (1942). *Children above IQ 180.* New York: World Books. (This book is out of print, but is available in many libraries. It is easy to read and as timely today as when it was written.)

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Most gifted programs do not address the needs of the highly gifted or those students with prodigious talent in specific areas such as math or writing. These students just don't fit into a school structure that is organized by age. Acceleration including entering school early, skipping grades, telescoping several years, or moving ahead in a single subject area are all good strategies for these children. Other options include individualized educational programs (IEPs), special programs for the highly gifted, university-based summer programs, mentors, home teaching, and counseling[11].

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[11]Also see the section called *How can you help your highly gifted child* on page 13 of this guide for more help understanding and meeting the needs of the highly gifted child.

SECTION II: HOW CAN I HELP MEET THE NEEDS OF MY GIFTED AND TALENTED CHILD?

In the first section of this guide, we learned about many of the characteristics of gifted and talented children. You may have seen things that remind you of your child; he or she may be gifted or talented. Many parents wonder if having a gifted child is a blessing or a curse. There maybe people who see gifted programs as elitist and gifted parents as pushy. Grandparents or friends may offer you advice on raising gifted children.

How do you sort out the useful advice from the unproductive? How do you answer those who are discouraging in their comments? The following quiz will test your knowledge of gifted and talented children. The answers to the questions are based on findings of educational research on the gifted as assembled by Margaret Anthony[12].

QUESTIONS: TRUE OR FALSE

1. If my child does not score 130 or better on an IQ test, s/he is not gifted.
2. Enrolling your child in a program for the gifted/talented is undemocratic.
3. Creative children prefer to have direct instructions.
4. The best way to ensure friendship for your gifted/talented child is to have him/her associate with the same chronologically-aged child.
5. When looking at the bell-shaped curve, mentally retarded and intellectually gifted have been found to include approximately the same percentage of the total population.
6. There are no states that offer programs for the gifted and talented. States only offer programs for children with handicaps.
7. Gifted/talented children are precocious, physically weak, and socially maladjusted.
8. A gifted/talented child will automatically perform up to his/her intellectual potential.
9. Teachers do a better job than parents in spotting gifted/talented children.
10. You are a 34-year-old parent of a gifted 7-year-old. The child is so bright you cannot provide for his/her need.
11. As a parent, you should never admit you don't know an answer to your child's question.
12. Gifted/talented children should not have to do household chores.
13. Gifted/talented children require total freedom.
14. A child gifted in mathematics will also be gifted verbally and socially.
15. A child's intellectual growth is least active in development from birth to age four.
16. Gifted/talented students always finish high school.
17. Gifted/talented children rarely learn to read before they enter school.
18. Gifted/talented children learn basic skills more quickly than do other children of the same age.
19. The only way to provide for a gifted/talented child is by acceleration.
20. The best way to teach gifted/talented children is by ability grouping.

[12]Margaret Anthony is the principal of Norest Elementary School in Storrs, CT. The quiz originally appeared in the January/February 1991 issue of *G/C/T*.

SECTION II: HOW CAN I HELP MEET THE NEEDS OF MY GIFTED AND TALENTED CHILD?

ANSWERS

Directions: To score the test, count the number of items marked correctly. If you score 5 or less, you either don't have a gifted child, or you'd better do some background reading immediately. If you score between 6 and 10, consider yourself below average in knowing what giftedness is all about. Between 11 and 15, feel free to puff out your chest a bit; you're knowledgeable indeed. Sixteen or more? Why aren't you doing more work with your local gifted group?

1. FALSE. Getzels and Jackson (1962) show that creative and divergent adolescents did as well in school as children with IQs 23 points higher. An IQ test is only one very narrow way to identify giftedness (Marland, 1972). There are also creativity tests, achievement tests, tests in motor and language skills, peer and parent identification, and experts' evaluation of students' talents in art, music, and performing arts.

2. FALSE. Being democratic does not mean everyone must receive the same educational experiences (Gardner, 1961). Just as football teams and high school bands have provided for children with special physical and musical abilities, so programs for the gifted and talented can help provide quality education.

3. FALSE. Along with excellent memory, good imagination, sense of humor, long attention spans, insatiable curiosity, and asking questions, gifted children have the characteristic of enjoying independent learning. The gifted child needs increasing amounts if independence in order to pursue projects, interest, and hobbies (Renzulli, Hartman, 1971).

4. FALSE. When a child is young, the most significant factor in being a member of a group appears to be similarity of mental age. Friendships occur in children with the same mental age rather than the same chronological age. This is another reason the acceleration of a grade in school may not harm a gifted child.

5. TRUE. Between three and five percent of the school population are estimated to be gifted and talented. Experts estimate there are about two million gifted children.

6. FALSE. According to the Counsel for Exceptional Children, there are at least 34 states offering programs for the gifted through either legislation or administration policies.

7. FALSE. Longitudinal studies by Lewis Terman et al. (1945) show the old stereotypes of the maladjusted gifted child to be false. His studies of 1,500 gifted people showed they have superior physical health, more stable marriages, and delinquency a fraction of what it is in the general population.

8. FALSE. Thinking gifted students can take care of themselves or that talented children will perform at their top potential without help, special programs, or attention was pointed out to be false in a 1971 report to Congress.

9. FALSE. Parents are good at identifying the child as gifted. If you think your child is gifted, let the school know. Young children tend to want to conform and often hide a talent or special ability.

10. FALSE. Raising a very strong-willed, confident, bright seven year old is demanding and challenging. It need not be frightening or intimidating. Remember, you are not alone. Other parents of gifted children have similar problems. Many states have associations for gifted children which send out newsletters or form parent groups to discuss such problems.

11. FALSE. Both parents and teachers (parents are their children's first teachers) must be able to admit that they don't have all the answers. The important thing is to search for an unknown answer together. This process will help a child learn the inquiry method, use reference books, and keep lines of communication open (Gallagher, 1975).

12. FALSE. As a parent, you want your child to learn good work habits and to become organized and responsible for his/her behavior. Feeding a family pet, making the bed, and setting the table for supper are small but important ways to develop these traits.

13. FALSE. Don't be afraid to set limits. Give you child freedom and support for making his/her own decisions within a framework or clear guidelines. Be sure to be consistent in following through on your guidelines (Gowan, 1964).

14. FALSE. Gifted children are like any other children. They display a wide range of growth patterns. All children do not develop at the same time or in the same areas. You can find a child very advanced in math concepts but weak socially, or slow in developing physically. Another child may be well rounded, or the next child a whiz in language. The school should provide programs to challenge your child in areas of both strength and weakness (Hildreth, 1966).

15. FALSE. According to May Pines (1967), the child's intelligence grows as much from birth to four as in the next thirteen years. This information requires parents to provide a rich environment for the preschool child. How do you go about creating this stimulating environment in your home? Select toys that are open ended, that can grow and change with the child's imagination, and that allow input from the child and are not rigidly premolded from the factory. Select toys that are long lasting; they need not be expensive. Take the child to libraries, airports, factories, plays, museums, concerts, and arboretums.

16. FALSE. There is a high percentage of gifted and talented students who drop out of high school because their abilities are not recognized and challenged by the schools (French, 1968).

17. FALSE. Gifted children often learn to read early. They usually have a lifelong love of reading. Some gifted children even teach themselves to read before entering kindergarten (Durr, 1960).

18. TRUE. One of the characteristics of gifted children is their ability to learn rapidly with little repetition (Barbe, 1965). Teachers and parents must be on the lookout for signs of boredom. A bored student can turn into a discipline problem. A word of caution is necessary: when a child says s/he is bored, this may be a behavior pattern of avoiding something new, frightening, or difficult.

19. FALSE. School systems can accommodate gifted children by acceleration (skipping grades). By compressing the school curriculum, they can also have a program of early admission to kindergarten or first grade. Compressing the school curriculum can permit students to graduate ahead of schedule (Bish, 1968).

20. FALSE. There are many ways to provide challenging programs for gifted children. They include individual instruction from the regular classroom teacher, resource rooms, special schools or classes, summer programs, Saturday classes, and special classes at the university (Hildreth, 1966). Your child needs an honest perspective of the world. Some time must be spent learning with other bright children. It is not realistic or healthy always to be the first, smartest, and the quickest in everything. Children need to learn there are many other children like themselves in the world (Torrance, 1967).

PARENTING CONCERNS

HOW CAN YOU HELP YOUR HIGHLY GIFTED CHILD?

Those parents who have highly gifted children, and others who are interested in these special individuals, can learn much from the experiences of another parent of such a student. Stephanie Tolan writes children's books and had a highly gifted child. She shares her thoughts on this group in the following reprint[13].

Most parents greet the discovery that their child is not merely gifted but *highly* or *profoundly* gifted with a combination of pride, excitement, and fear. They may set out to find experts or books to help them cope with raising such a child, only to find that there are no real experts, only a couple of books, and very little understanding of extreme intellectual potential and how to develop it. This digest deals with some areas of concern and provides a few practical suggestions based on the experience of other parents and the modest amount of research available.

Differences

To understand highly gifted children it is essential to realize that, although they are children with the same basic needs as other children, they are very different. Adults cannot ignore or gloss over their differences without doing serious damage to these children, for the differences will not go away or be outgrown. They affect almost every aspect of these children's intellectual and emotional lives.

A microscope analogy is one useful way of understanding extreme intelligence. If we say that all people look at the world through a lens, with some lenses cloudy or distorted, some clear, and some magnified, we might say that gifted individuals view the world through a microscope lens and highly gifted individuals view it through an electron microscope. They see ordinary things in very different ways and often see what others simply cannot see. Although there are advantages to this heightened perception, there are disadvantages as well.

Since many children eventually become aware of being different, it is important to prepare yourself for your child's reactions. When your child's giftedness has been identified, you might open a discussion using the microscope analogy. If you are concerned that such a discussion will promote arrogance, be sure to let the child know that unusual gifts, like hair and eye color, are not earned. It is neither admirable nor contemptible to be highly gifted. It is what one does with one's abilities that is important.

A United Front

As in most other aspects of parenting, it is important for both parents (or the adults who bear primary responsibility for raising the child) to agree on some basic issues regarding the child's potential. Some parents of exceptionally gifted children were themselves gifted or exceptionally gifted children. If they did not learn to accept and understand their own giftedness, they may find it difficult to accept their child's unusual capacities. Raising a highly gifted child may help parents come to terms with many difficult aspects of their own lives, but it helps if they focus first on the needs of the child and come to an agreement about how to meet them.

What Highly Gifted Children Need

Exceptionally gifted children have two primary needs. First, they need to feel comfortable with themselves and with the differences that simultaneously open possibilities and create difficulty. Second, they need to develop their astonishing potential. There is a strong internal drive to develop one's abilities. Thwarting that drive may lead to crippling emotional damage. Throughout the parenting years, it is wise to keep in mind that the healthiest long-term goal is not necessarily a child who gains fame, fortune, and a Nobel Prize, but one who becomes a comfortable adult and uses gifts productively.

The Early Years

Before your child begins formal schooling, differences can be handled by your willingness to follow the child's lead and meet needs as they arise. It is possible and important to treat an infant's or toddler's precocity with a degree of

[13]This section is from a series of flyers on gifted education published by the ERIC Clearinghouse on Handicapped and Gifted Children and the Council for Exceptional Children (CEC). The materials are in the public domain and may be freely reproduced and disseminated. Parents might be interested in the entire set of materials on gifted children and education. Tolan's piece appears in:
Tolan, S.S. (1989). Helping your highly gifted child. *ERIC Digest*, #E477. Reston, VA: The Council for Exceptional Children.

normalcy. For example, a 2-year-old who prefers and plays appropriately with toys designed for 6-year-olds should be given those toys. The 3-year-old who reads should be given books. The child who speaks very early and with a sophisticated vocabulary should be spoken to in kind.

Public Attitudes

Even when parents can take precocious achievements in stride, friends, family, and strangers may not. Unthinking people will comment (often loudly and in front of the child) that a 2- or 3-year-old who sits in the grocery cart reading packages aloud is a phenomenon.

It may be surprisingly difficult to avoid letting parental pride lure you into encouraging your child to "perform" in public. Keep in mind the goal of making the child as comfortable as possible with individual differences. The more casually you accept unusual early accomplishments, the more your child will be able to see those accomplishments as normal. Later, when gifts are no longer quite as noticeable, the child will not feel that what made him or her valuable has somehow been lost.

Multiple Ages

Highly gifted children are many ages simultaneously. A 5-year-old may read like a 7-year-old, play chess like a 12-year-old, talk like a 13-year-old, and share toys like a 2-year-old. A child may move with lightning speed from a reasoned discussion of the reasons for taking turns on the playground to a full-scale temper tantrum when not allowed to be first on the swing. You can help yourself maneuver among the child's ages by reading about developmental norms (Gesell is a good guide) so that you are ready for (and avoid punishing) behavior that, although it seems childish in a precocious child, is absolutely age appropriate.

School

If your 9-month-old begins speaking in full sentences, you probably will not tell the child to stop and wait till other 9-month-olds catch up. You would not limit such a child to using nouns because that is as much speech as most 9-month-olds can handle. However, in public or private school that may be the approach some educators use.

It is important to realize that they are not purposely setting out to keep your child from learning, although that might be the effect. Many educators have never knowingly dealt with a highly gifted child. They do not recognize them, and they do not know how to handle them. Some educators base teaching methods on developmental norms that are inappropriate for highly gifted children. Although they may be willing to make an effort to accommodate these youngsters, they may lack sufficient information or experience and not know what type of effort to make.

When a child enters school already able to do what the teacher intends to teach, there is seldom a variety of mechanisms for teaching that child something else. Even if there were a way to provide time, attention, and an appropriate curriculum, it would be necessary for the teacher to use different teaching methods. Highly gifted children learn not only faster than others, but also differently. Standard teaching methods take complex subjects and break them into small, simple bits presented one at a time. Highly gifted minds can consume large amounts of information in a single gulp, and they thrive on complexity. Giving these children simple bits of information is like feeding an elephant one blade of grass at a time — he will starve before he even realizes that anyone is trying to feed him.

When forced to work with the methods and pace of a typical school, highly gifted children may look not *more* capable than their peers, but *less* capable. Many of their normal characteristics add to this problem. Their handwriting might be very messy because their hands do not keep pace with their quick minds. Many spell poorly because they read for comprehension and do not see the words as collections of separate letters. When they try to "sound out" a word, their logical spelling of an illogical language results in errors. Most have difficulty with rote memorization, a standard learning method in the early grades.

Lack of Fit

The difficulty with highly gifted children in school may be summarized in three words: *They don't fit.* Almost all American schools organize groups of children by age. As we have seen, the highly gifted child is many ages. The child's intellectual needs might be years ahead of same-age peers, although the gulf may be larger in some subject areas than in others.

Section II: How can I help meet the needs of my gifted and talented child?

Imagine 6-year-old Rachel. She reads on a 12th grade level, although her comprehension is "only" that of a 7th grader. She does multiplication and division, understands fractions and decimals, but counts on her fingers because she has never memorized addition and subtraction facts or multiplication tables. Her favorite interests at home are paleontology and astronomy; at school her favorite interests are lunch and recess. She collects stamps and plays chess. Although she can concentrate at her telescope for hours at a time, she cannot sit still when she is bored. She cries easily, loses her temper often, bosses other children when they "don't do it right," and cannot keep track of her personal belongings. She has a sophisticated sense of humor that disarms adults but is not understood by other children.

Putting Rachel into a regular first grade without paying special attention to her differences is a recipe for social, emotional, and educational disaster. Even if a gifted program is available (they commonly begin in third or fourth grade), it is unlikely to meet her extreme needs.

Educating a highly gifted child in school is like clothing a 6X child in a store where the largest available garment is a size 3 (or with a gifted program, a 3X). Parents have to resort to alterations or individual tailoring of whatever kind they can manage.

In dealing with school issues, it is important to remember that you know more about your child than anyone else. Your knowledge, information, and instincts are useful and important, and they should be recognized in designing a school program. Your child needs *individual attention*. Anything else may be directly and seriously harmful.

There is no ideal school pattern for the highly gifted child. However, when normal school patterns lead to difficulty, it is important to obtain real differentiation.

Acceleration

Because highly gifted children may begin school already knowing much of the material covered in early grades and because they learn quickly, some type of acceleration is necessary. For some children and in some situations, grade skipping is the best choice. Placing a child with older children who share interests may be socially and intellectually beneficial and result in a more appropriate curriculum. It is also a simple and economical solution for the school. Some children begin school early; others skip several early grades; others skip whole educational levels, such as junior high or even high school. Skipping a single year is seldom helpful, because the difference between one grade level and the next is too small. Grade skipping is not without problems, but allowing highly gifted children to stay in a class that meets few if any of their needs may do serious and long-term damage.

Another type of acceleration is subject matter acceleration. A child may take mathematics with a class four grades ahead, reading with a class two grades ahead, and physical education with age peers. This type of acceleration takes into consideration the varying developmental ages of the highly gifted child. For further flexibility, you might consider evening classes or weekend classes at a high school or college and ask the school to excuse coverage of those subjects in regular classes. A child might go to school with agemates only in the morning or only in the afternoon. This method calls for school and parent flexibility and may lead to logistical problems with scheduling and transportation, but it is often more satisfactory than grade skipping because the child associates at least part of the time with age peers.

When the School Will Not Change

When parents approach teachers and administrators with information and documentation, in a spirit of cooperation rather than confrontation, offering suggestions and help rather than attacking, some positive changes in normal methods usually result. Sometimes, however, schools refuse to make changes for one child. When this happens, parents have few choices. One is to move to a school system that will make changes. Another is home schooling.

For many highly gifted children home schooling is a nearly ideal solution to the problem of fit. Instead of laboriously altering ready-made programs, parents can tailor an education precisely to the child's needs. Clubs, sports, scouting, and other activities supply social interaction with other children while parents serve as teachers or facilitators or engage tutors or mentors in various subject areas.

Home schooling is seldom an easy choice. In some districts it is either illegal or beset with regulations that

make it almost as rigid as classroom schooling. When both parents or the single resident parent must work, it may be impossible. Some parents and children find the level of togetherness stifling, while others cannot avoid pushing and demanding too much. However, home schooling may be a positive choice for many families. Many children move surprisingly smoothly from home schooling in the early years into high school or college when their intellectual needs outgrow the home environment. One of the major benefits of education at home is the maintenance of self-esteem, which is highly problematic in a school environment.

Social/Emotional Needs

In the movie *E.T.* there was something heartrending in the small alien's attempts to "phone home," in his constant longing for others of his kind despite the loving concern of the family who cared for him. Highly gifted children endure some of that same pain. It is hard for them to find kindred spirits, hard for them to feel they fit into the only world they know.

Highly gifted children may have trouble establishing fulfilling friendships with people of their own age when there are few or no other highly gifted children with whom to interact. As a high school student told his mother, "I can be that part of myself that is like my classmates, and we get along fine. But there's no one I can share the rest of me with, no one who understands what means the most to me." For most highly gifted children, social relationships with age peers necessitate a constant monitoring of thoughts, words, and behavior.

One of the greatest benefits of the talent searches proliferating in colleges across the country is the chance for highly gifted children to spend time with others like themselves. For three weeks in the summer, children who qualify (by scoring high enough on the SAT or ACT in the seventh grade or earlier) attend class on a college campus with other highly gifted children. Rather than feeling like oddballs, they suddenly feel normal. Lifelong friendships may form in a matter of days. Many summer program participants consider the social interaction as valuable as the classes.

What else can you do to help highly gifted children find friends? It helps children to understand that there are different types of friends. They may play baseball, ride bikes, and watch TV with one person; talk about books or movies with another; and play chess or discuss astronomy with another. Some of these friends may be their own age, some may be younger or, more often, older. Only in school is it suggested that people must be within a few months of each other in age to form meaningful relationships.

And finally...

Raising a highly gifted child may be ecstasy, agony, and everything between. Adults must perform almost impossible feats of balance — supporting a child's gifts without pushing, valuing without overinvesting, championing without taking over. It is costly, physically and emotionally draining, and intellectually demanding. In the first flush of pride, few parents realize that their task is in many ways similar to the task faced by parents of a child with severe handicaps. Our world does not accommodate differences easily, and it matters little whether the difference is perceived to be a deficit or an overabundance.

We have covered only a few issues in this space, but the most important help you can give highly gifted children can be expressed in a single sentence: Give them a safe home, a refuge where they feel love and genuine acceptance, even of their differences. As adults with a safe home in their background, they can put together lives of productivity and fulfillment.

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PARENT ADVOCACY

I'M READY TO SPEAK OUT ON BEHALF OF MY CHILD, BUT I DON'T KNOW HOW TO START BEING AN ADVOCATE FOR HIM OR HER.

Joan Smutny[14] points out that, "Parents are the child's first and most intimate and influential advocates. From day one, this role is defined as love, respect for a child's feelings, encouragement of self-expression, nurturing of creativity, and individuality." Smutny recommends that as your child matures and enters school you can expand your role as advocate to include lobbying and diplomacy. Establish productive relationships with your child's teachers. Cultivate a feeling of shared interest and concern for your child and all children in the class. Some ways to do this from Joan Smutny and Dorothy Knopper include:

- Initiate cordial contact before the school year begins, or as soon as possible after it starts. Review your child's situation and discuss the need for appropriate intellectual challenge and support.
- Provide a portfolio of your child's work, including samples of writing or art, lists of books that illustrate your child's reading ability or interest, and other materials that can help alert the teacher to this child's potential[15].
- Maintain a relaxed and open line of communication with the teacher. Tell the teacher your concerns before they become problems, and discuss any problems before they become crises. Respond to the positive things that happen in the class just as readily as to the negative. Send notes of appreciation for special efforts by the teacher, or tell the teacher that you are aware of his or her efforts to appropriately meet your child's needs. Tell the teacher about the times your child communicates the ways he likes the teacher or class. Say "Thank you" when someone works well for your child.
- Collaborate with the teacher to provide opportunities for your child to pursue topics of study in more depth or at an advanced level.
- Offer your help: drive on field trips, work in the library, share your individual talents and skills (computers, hobbies, etc.), volunteer to lighten the classroom teacher's load, or serve on school improvement committees.
- Be an advocate and not an adversary. Get rid of the hostility before speaking to your child's teacher. It will be counterproductive in the end. Instead, adopt a positive attitude, and smile. Set an example for your child by articulating needs and not just griping and complaining. Contribute to the school community in positive ways, sensitively acknowledging success, and accepting and learning from personal disappointments without harboring defeat or guilt.
- Learn the proper channels in your school or district. Then, go through the appropriate hierarchy. Typically this will mean expressing your concerns first to your child's teacher, then to the principal, site-based management team, the school district administrators, superintendent, school board members if necessary, and in rare intransigent cases, the state education agency.
- Take time to learn more about gifted and talented education and education in general. A good place to start is to look over the "educationese" definitions on pages 38-46 of this guide.
- Be honest with your children and value their opinions. Let them know that you're communicating with the school about their individual needs, and share your advocacy efforts with them.

There are several ways you can be an advocate for your child. You can work to support and improve the existing programs in your school district. If a parent group does not exist in your district or school, start one. Parents can

[14] Joan Smutny is Director of The Center for Gifted at National-Louis University in Evanston, IL. She has written several books on gifted education. The quote on parent advocacy is from an article she wrote for a special issue of *Understanding Our Gifted* on parent advocacy. Smutny, J.F. (January/February 1993). Enlightened advocacy: Developing a vision for life. *Understanding Our Gifted,* 5 (3), 1, 8-10.
[15] For more ideas on creating and using a portolio see *Understanding Our Gifted,* 5(1), page 7.

provide information to the decision makers in your district or school. They can create and foster community understanding and support. Finally, parents can influence legislation that will affect their child and all of the children of the state. Let's take some time to look at each of these advocacy activities in more detail.

WHAT CAN I DO TO SUPPORT AND IMPROVE OUR CURRENT PROGRAMS?

This is an ideal time for parents to become involved with the programs in their schools. Site-based management of schools is becoming more popular. When this management practice is working the way it is intended, teachers, principals, and parents form teams to do planning and make decisions. Parents of gifted and talented students need to take an active role in these committees.

You can also work to bridge the gap between your child's classroom teacher and yourself. James Webb[16] gives us a set of very useful guidelines for working with the teachers your child encounters.

BRIDGING THE GAP: GUIDELINES FOR PARENTS AND TEACHERS

1. Recognize that home and school have different goals, tasks, situations, and constraints. Schools focus primarily on academic preparation, secondarily on socialization. At home, the focus is primarily on socialization, secondarily on academics.
2. Both are very important in the long-term effects on gifted children, though of the two, homes may be more crucial. The ideal is for both to work together to avoid conflicts or to bridge gaps.
3. Misunderstandings, differences in expectations, and disappointments usually can be avoided if parents become involved in the school functions early and continually. Parents: making yourself known to teachers, principals, guidance counselors, etc. early and frequently is important.
4. Parents should offer to help teachers, librarians, etc. in ways that benefit *all* children, not just gifted students. Avoid appearing elitist. Gifted children's educational needs are often different, but gifted children are not necessarily "better."
5. Support school efforts to plan for able children. Help to interest the PTA and the school administration/ school board in the topic. Support study groups on gifted children and similar cooperative endeavors. Ask if parents can attend school in-service programs on gifted children.
6. Parents: make periodic gifts of books, articles, or tapes about gifted children to the teacher, principal, guidance counselor, or librarian.
7. Parents and teachers must not give the impression of "pushing" or "exhibiting" a child, but should continually strive to give the child whatever he or she needs to reach his or her potential.
8. Teachers most often fear/expect that parents of gifted children will be "unguided missiles" and critically demanding of special favors for their child. Parents most often fear/expect that teachers will not understand and will "take it out" on their child. Rarely is either one true.
9. Teachers increasingly are more informed about gifted children and their special educational needs, but also are often hampered themselves by the constraints of the educational system within which they work and their responsibilities to the other children they teach. The search for solutions to school problems must start with the realities of the classroom, in the same way that solutions to home problems must start with realities there.
10. If a problem seems to exist between home and school, first consider that what the child tells you is that child's perception. The problem may be with the perception rather than with the situation.
11. Parent-teacher consultations are strongly recommended. Not only do they allow sharing of information and avoidance of being manipulated by the child, but they also promote the building of a focused alliance to stimulate the child's achievement and self-concept.

[16]Dr. Webb is the co-author of an excellent book on understanding your gifted child. His book is easy to read and packed with good ideas. Webb, J.T., Meckstroth, E.A., & Tolan, S.S. (1982). *Guiding the gifted child: A practical source for parents and teachers.* Columbus, OH: Ohio Publishing Company.

12. Define concretely for yourself what you hope to accomplish in the parent-teacher meeting(s), and begin to formulate a specific plan for achieving those goals in the meeting(s).

13. Prior to your conference, evaluate what *new* information you have, and consider how your information might differ from what the other knows about the child. Seek to *share* observations and information.

14. How much of your information can the other use constructively? Will your information:
    - Demonstrate a pattern, or promote understanding, or evoke compassion?
    - Frighten the other, lead to unhelpful behavior, or disrupt the relationship with the child?

15. Express understanding of the other's feelings and viewpoints in the situation. Attempt to engage the other as an ally rather than as an enemy. Be sensitive to the other possibly feeling invaded.

16. Avoid blaming. Recognize that most persons do not act out of malice but rather they drift into problem situations through oversight, lack of information, or attempting to handle too many responsibilities. Only rarely is there a teacher or parent who "just doesn't care" or who is actively malicious.

17. Avoid trying to bludgeon insight or your point of view into others. It does not work , and only results in resentment and hardening of positions.

18. Initially ask for the other's overall perceptions of the child – how the child is doing and what the teacher's or parent's plans are. This allows you to learn where you are starting from – and may bring some pleasant surprises.

19. Parents: give the teacher professional respect in your approach, even if you must disagree at times. Teachers need support also. It is important that you not appear to be attacking the teacher's ability or character.

20. Teachers: parents need to feel genuinely listened to and respected, rather than like intruders or "only a parent." They are only seeking what is best for their child – from their point of view.

21. In your conversations, avoid saying, "What are you going to do about..." Instead say, "What can *we* do about..."

22. In sharing new information, start with those parts most likely to fit with the other's perceptions, and which will tend to build a common base from which to begin. Actively seek the other's opinions. Ask what the other thinks about each new piece of information.

23. Gradually share more information as the conversation progresses. Avoid "dumping" all of your complaints or new/different information onto the other. Instead, after each major piece of information, stop to check and see how this fits with the other's perceptions or beliefs about the child or the situation.

24. Receive new information from the other as openly as possible, and ask questions in a spirit of curiosity rather than defensiveness.

25. When making a point, give examples and data rather than just general opinions.

26. If you have data from an "outside expert," remember that this can often be quite threatening since it tends to imply, "See, you are wrong!" Try to present such information in ways that allow the other not to "lose face."

27. Focus on solutions or attempts at problem solving that are in small steps, measurable in outcome, and achievable. Avoid broad, sweeping generalities such as "improve self concept."

28. Always attempt to give an alternative when making suggestions or recommendations.

29. Emphasize ways that show working jointly is clearly preferable, and that will make teaching or parenting easier or more enjoyable.

30. Try to come to an agreement on some specific joint action plan, even if it represents only a partial solution, or to meet again.

31. If agreement is not reached, or is only partially reached, do not insist on a definitive answer right then. Give the other person time to think and reflect on the new possibilities or new data.

32. Follow up the conference with a brief letter of appreciation confirming your understanding of the issues, information, and actions that are planned by each.

33. Often it may be wise to involve the guidance counselor, principal, or others in parent-teacher conferences, though this can leave one or more people feeling "ganged up on." Realize that administrators must be supportive of their teachers, at least in public, but that they are typically also quite sensitive to concerns by parents and other members of the public.

34. Sometimes, though, conferences do not work. Know when to give up trying to build a bridge or to change a situation. Instead, the focus may have to be on coaching the child to cope, building a safety net, or moving the child to a new class or new school.

35. Most of all, keep on modeling active problem solving for the child!

HOW TO BE A "PUSHY PARENT"

Have you ever been accused of being a pushy parent? Does the label make you feel uncomfortable? Our need to be advocates for our children can come in conflict with the apparent goals of the schools our children attend. This conflict puts us in an awkward situation. Linda Silverman[17] identifies several reasons why being a pushy parent may not be such a bad thing.

Personality Plus: How to be a "Pushy Parent"

One of the greatest fears I have encountered in parents of gifted children is being perceived as "pushy." They are overly cautious about providing appropriate home stimulation for fear that friends, neighbors, and relatives will perceive their child's advancement as the result of their pressuring and overinvestment. Many parents who are also trained as teachers have tried to defend themselves from attack by offering, "I didn't teach her to read. Honest. She did it on her own when I wasn't looking."

Why should parents be afraid of teaching their children anything they want to teach them? It is abundantly clear from the literature that prodigies, MacArthur Fellows, and individuals who achieved fame by the age of 35, all had the benefit of rich home stimulation before they were of school age (Bloom, 1985; Feldman, 1986). We know that parents are their children's first teachers, so why aren't they prized for exercising that role effectively? For that matter, why aren't parents prized for just being good parents? As a society, we are quick to blame parents but we are not as good at recognizing and acknowledging good parenting.

Parents of gifted children have been placed in a no-win situation. If they try to develop their children's abilities to their fullest, they often find themselves in an adversarial position with the schools. Schools have a different agenda. The child needs to fit in with the system, to learn to get along with agemates, to learn to do boring work even if nothing is learned by it, because that's the only way she will learn to live in the "real world." And the purpose of school is to prepare the child for that "real world." If the parents assume that the school is right and that their child needs to adjust to norms of the group, then the child often feels that her individuality is not cherished, that the parents have abandoned her to the needs of the system.

Until there are federal laws protecting gifted children and assuring that they get an education commensurate with their needs, parents will have to bear the burden of being their children's advocates – even when it means being branded a "pushy parent." It is the squeaky wheel that gets oiled. These children are too young to advocate for themselves. In as polite and cooperative a manner as possible, parents need to continue to inform the schools of the needs of their children and to monitor to make sure those needs are being met. They need to get together with other parents so that they don't feel as vulnerable. Strong parent advocacy groups can often accomplish more than a single family.

Perhaps "pushy parent" needs to be perceived as a compliment. *Yes, I am a parent who cares deeply about my child. I care more about my child than about my reputation. I am willing to push the school system to respond to the unique needs of my child.*

[17] *Understanding Our Gifted*, 5(5), January/February 1993, p. 14. Reprinted by permission. Linda Silverman directs the Gifted Child Development Center in Denver, CO. She is the editor of the book: Silverman, L.K. (1993). *Counseling the gifted and talented*. Denver, CO: Love Publishing.

Being "pushy" only becomes problematic under the following circumstances: (1) if the child feels pressured to perform for the parents; (2) if the parents look upon their child's education as a means of giving their child an edge in the competition of life; or (3) if the parents do not take into account the self esteem of those from whom greater responsiveness is sought. Only the parents can determine if any of these charges are accurate and need to be corrected. If, upon soul searching, none of these apply, then the false accusations will have to be ignored in favor of the more important goal of making sure their child's needs are being met.

References

Bloom, B.S. (Ed.). (1985). *Developing talent in young people*. New York: Ballentine.

Feldman, D.H., with L.T. Goldsmith. (1986). *Nature's gambit: Child prodigies and the development of human potential*. New York: Basic Books.

STARTING A PARENT GROUP

As a parent, you can exert great influence on the existence and quality of a gifted program or options in your district; however, you may not always feel very powerful after visiting with your child's teacher or school administrator. Too often, as the parents of a gifted child, we feel hesitant or uncertain about our role as an advocate for our child or in effecting change in the school.

One way to overcome these feelings, to support appropriate education for gifted and talented children, and to make a difference in what happens for your child and all gifted and talented children in the school is to join with other parents and to form a parents support and advocacy group. These groups can be as formal or as informal as you and the other parents like. You can meet occasionally over refreshments in someone's home or you can incorporate and become a full-fledged organization.

What kinds of things can a parent support group do[18]? Some common goals of parent groups or of families that belong to these groups include:

- Meet with others for support and encouragement.
- Find other children with similar interests for your child to play with.
- Find more information about gifted children and their needs.
- Arrange speakers and contacts to provide guidance in addressing these needs and their associated joys and problems.
- Be an instrument for starting or modifying a gifted program or for adding new options to existing programs.
- Provide a forum for discussion of ideas about particular programs or options.
- Provide financial support for individual students or programs.
- Identify appropriate recreational and intellectual activities for gifted children.
- Disseminate information about enrichment activities in the evenings, on Saturdays, or in the summer.
- Train parents to be advocates for their child.
- Advocate at local, regional, and/or state level.
- Network with parents from other support groups in other communities[19].

COMMUNICATING WITH THE SCHOOL

WHAT ARE SOME QUESTIONS I SHOULD BE ASKING WHEN I TALK TO MY CHILD'S TEACHERS, PRINCIPAL, GIFTED COORDINATOR, OR WHEN I VISIT MY CHILD'S SCHOOL?

There are many things about the district's gifted and talented program and options that are appropriate for your child. We have listed a few of the things that might be important for you to know. As you read the following questions you will undoubtedly think of others. These are offered as a starting place.

[18]It is helpful for parents and parent organizations to contact individuals who are knowledgeable and experienced in guiding parent groups and discussing parenting issues and concerns. For excellent ideas and help in training parents, developing parent organizations, or for guidance on working with schools, contact: Donna Enersen, Ph. D., 1911 Perrine Street, Lafayette, IN 47904. (317) 742-2090.

Many different guidelines and tips exist for creating a successful parent group. Specific information is available in TAGT's parent packet, which is sent free of charge to interested parents. Contact TAGT to request your copy.

[19]The Parent Affiliates of the Texas Association for the Gifted and Talented (TAGT) provide numerous opportunities for this interaction and training. There are special sessions for parents at the annual conference of the Association in November. TAGT also organizes an annual mini-conference in the summer that just deals with parental concerns. Various regions of the state have local parent training and information opportunities. Call TAGT (512/499-8248) for more information about the state and regional sessions.

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- Does the school district have a written vision, philosophy, or goal for the gifted and talented program? Can you see a copy? The ease or trouble this request brings suggests something about the nature of the planning and use of the planning that has occurred in your district.
- What services or program options, and at what grade levels, are available to gifted students with special needs? (Program options, testing, IEPs, tutors, mentors, counseling, referrals, etc.)
- How does the school define gifted and talented? How are students selected for the program or the program option? Do the identification procedures used in the district or school seem designed to find the child's gifts and talents or do they primarily function as a means to limit enrollment in the gifted program?
- Is there a parent association or district support group? When do they meet? Who can you contact for more information? Do they produce a newsletter or have minutes from previous meetings?
- Do you feel welcome in the school? Are your ideas and insights sought out? Are your questions addressed?
- Are the gifted and talented children spending most of their day in "learning" experiences and not just "being in school?" This is an important concern for parents of gifted children. Too often, these children are relegated to waiting for others to catch up or to acting as peer mentors for large portions of the day for students who are still learning the content.
- Is most of the disciplinary attention in class spent on maintaining a quiet, controlled environment or is it on creating a positive learning environment?
- Are the individual needs and strengths of children addressed? Are all the students in the class expected to be doing the same thing at the same time? What provisions have been made for students who have mastered the content already or who can learn the content in a fraction of the time of the rest of the class? Are these children challenged at an appropriate level or do they spend much of their time waiting for or helping others?
- Is there a written curriculum plan which describes the differentiation used for gifted and talented learners? Has the plan that is on paper been implemented in classrooms?

The state of Texas is also interested in how well your school is meeting the needs of gifted children. In years past, the state has evaluated gifted programs in terms of their compliance with Texas laws and guidelines. Schools needed to follow the "letter of the law." Today, the state is increasingly interested in encouraging more than minimal compliance. To this end, they have adopted indicators of quality in gifted programs. Parents would be wise to read these indicators. You might provide the Texas Education Agency with ideas and comments about the future development and modification of the standards[20].

WHAT SHOULD I DO TO BE EFFECTIVE IN COMMUNICATING WITH MY CHILD'S TEACHER DURING CONFERENCE?

Communication between you and the teachers is vital to successful collaboration. You don't want to have a non-collaborative or confrontational relationship. In this kind of relationship, the parent and teacher become estranged antagonists. Each of you is certain your views are correct. This kind of relationship will not serve the needs of your child well. You and your child's teachers are partners in educating and meeting the needs of your child. You each bring a unique perception of your child and knowledge of appropriate education. As part of this collaboration, you will likely meet with you child's teacher during regular conferences or at specially arranged times.

Your conferences should not happen casually or haphazardly. Before you arrive, you should prepare. Then, you and your child's teachers can plan together to best meet your child's needs. The following list describes ways you can prepare for the conference, what to do during the conference, and actions you can take after the conference is over[21].

[20] The state of Texas assesses these quality indicators through a new program of Results-Based Monitoring (RBM). RBM is described in detail on pages 34-36 of this handbook. Comments, suggestions, or questions about the indicators should be addressed to: The Division of Gifted and Talented Education, Texas Education Agency, 1701 North Congress Avenue, Austin, TX 78701-1494. (512) 463-9455 or 9524.

[21] Many of these suggestions come from an article on parent and teacher collaboration. It provides guidelines for parents and teachers. Treffinger, D.J., & Fine, M.J. (December, 1979). When there's a problem in school: Some guidelines for parents and teachers of gifted children. *Gifted Child Today*, pp. 3-6.

Preparing for the conference:

- Discuss school excitements, concerns, or problems thoroughly with your child.
- Keep the issues clear in your own mind. Remember to not let your ego take over. Your driving concern is meeting the educational needs of your child.
- Before calling the teacher, spend some time analyzing your concerns. What do you want to discuss with the teacher? It is a good idea to write out some of your questions or statements before you actually meet.
- Be ready to discuss specific examples of your child's work, feelings, and behavior. Assemble supporting documentation (test scores, projects, incidents, etc.). Try to go to the meeting with more than causal impressions of your child's needs or the current school situation.
- Talking to several of your friends about your concerns will not change things at school. Visiting with your spouse or friends *can* help you think through and clarify your concerns; just don't stop with them. Set up a time and place to meet the teacher.
- Consider what attitudes and values are involved. The "problem" may involve differences of opinion or understanding of the situation, and not "a teacher doing bad things to my child."
- Keep an open mind about the motivation of your child's teacher. It is likely that you *and* the teacher are concerned with the same goal – helping your child.
- There may be honest, legitimate differences of opinion and judgements about how children, and your child, would best be educated. Can you articulate *your* beliefs and assumptions about education?
- Make an appointment with the teacher when there will be ample time for conversation – not in the corridor, after school, or in the middle of an open house.

During the conference:

- Be responsible, mature, concerned, and *not* aggressive, demanding, apologetic, or embarrassed in your communication. Share specific information about your child's interests and strengths, especially if you can tell the teacher things s/he may not know from school records.
- Listen carefully and ask questions for clarification when you don't understand.
- Be willing to help and share in the solution of the problems (What can I do? How can I help bring this about?).
- Talk about your ideas, concerns, observations, and not what you believe to be the teacher's problems. Use "I," not "you" statements. (i.e., I have been talking to my child and have some questions about...)
- Focus on solving the problem, not on polarizing the discussion. It should not be a discussion of "us versus you."
- Don't dwell on past angers, hurts, or complaints with teachers. Your concern today is, "Where do we go from here?"
- Don't criticize the teacher personally or attack the teacher's intentions or feelings about your child. These kinds of actions will get you nowhere.
- If reference is made to tests or test scores, ask for a full explanation of the numbers. Have the teacher help you understand what they know about your child's abilities and performance.
- Develop a plan of action for the teacher and you. What will happen at school and at home?

After the conference:

- Be ready to implement the plan devised.
- If you are still dissatisfied, don't blow up. Share as honestly as possible your concerns. Ask the teacher what else might be done to resolve or clarify the situation. If the teacher doesn't know (or claims not to), state your desire to discuss the matter further with others present (i.e., principal, school counselor, gifted coordinator, etc.)
- If the teacher is overly concerned about "basic skills" or "heterogenous grouping," seek information which will determine accurately what your child's actual needs are and how s/he might demonstrate mastery of skills without undue drill, repetition, or time spent teaching others.

SECTION III: HOW DO SCHOOLS MEET THE NEEDS OF THE GIFTED AND TALENTED?

HISTORY OF TAGT

In the mid 1970s, a unified voice for gifted and talented children did not exist in Texas. In February of 1978, a group of approximately twenty concerned parents and educators met together in Dallas to consider the feasibility of organizing a state-wide advocacy group to promote better educational opportunities for gifted students.

The results of this first meeting clearly showed a need for such an organization. Committees were formed to set up goals and by-laws. In June of 1978, Articles of Incorporation were filed, and a champion for the rights of the gifted and talented in Texas was born – the Texas Association for the Gifted and Talented.

From its beginning, TAGT knew that even though the Texas Legislature had for years supported legislation for gifted students, no funds had been allocated to assure that apporpriate services would reach these students in their local school districts. In 1987, legislation was passed requiring gifted programs in all school districts by 1990-91.

With a mandate in place, TAGT turned its attention to the State Board of Education to help assure that appropriate rules for local school districts to implement the mandate were passed. Today, TAGT continues to work with key decision makers to assure that quality programs for the gifted and talented will grow and improve in Texas.

One of the reasons for the existence of TAGT is to provide a unified voice for parents to help assure that the educational needs of their children are met. The organization's commitment to parent/community involvement has grown to include not only parent sessions at the annual state conference and regional institutes, but also the establishment of an additional state-wide conference dedicated entirely to addressing the needs and concerns of parents of gifted children

In 1990, a vice-presidency for parent/community involvement was created on the TAGT Board to ensure that TAGT never loses sight of the importance of parental involvement in the education of their children.

HISTORY OF THE GIFTED

The earliest examples of singling out individuals with unusual abilities probably occurred in prehistoric times[22]. People realized that certain individuals could do things others could not. The people (we call them gifted or talented today) were able to perform outstanding mental or physical deeds. They were thought to possess magic or power or to be divinely inspired, the incarnation of the gods on earth. Their ability to predict astronomical events, know when to plant or harvest, heal the sick, or make good leadership judgements appeared to transcend the mental powers of

[22]For an interesting discussion of the history of giftedness and talent, read the chapter by Robert Grinder or history chapter from Abe Tannebaum:

Grinder, R.E. (1985). The gifted in our midst: By their divine deeds, neuroses, and mental test scores we have known them. In F.D. Horowitz and M. O'Brien (Eds.) *The gifted and talented: Developmental perspectives*. Washington, DC: American Psychological Association, pp. 5-35.

Tannenbaum, A.J. (1983). Part I: History of the gifted. In Gifted children: *Psychological and educational perspectives*, New York: Macmillan Publishing Co. Inc., pp. 1-53.

ordinary individuals. The most skilled were venerated by the tribes and became their medicine men, chiefs, or priestesses. Differences between average people and gifted were so vast, people believed that the power must come from supernatural sources.

Our term for the very gifted has its roots in ancient understandings of this ability to do things others could not. To the Greeks, a "genius" was an elemental spirit, a muse, or a guardian angel. Their idea is based on a similar term that appears in the Moslem legend of the jinni (genie in English). Pythagoras was viewed by himself and by his followers as a prophet and mystic in addition to being a mathematician. Socrates claimed to literally have heard the voice of his spirit "murmuring in my ears, like the sound of the flute." Plato and Aristotle developed rational philosophies which gave greater weight to individuals' intellectual powers and down playing the effect of divine inspiration.

The idea of a magical being imparting divine wisdom to mortals continues in some sense even today. These spirits are credited as the sage on the shoulder whispering the story ideas Coleridge claimed to hear. Artists hope to be visited by the muse. We look for inspiration. The physical prowess of professional athletes seems superhuman. What is seen as magic or divine inspiration is really giftedness and talent plus a lot of practice, study, and years of hard work.

The Romans copied many of the Greek ideas and gods including their ideas about gifted and talented behaviors. With the fall of the Roman empire and the beginning of the dark ages, belief in sorcerers, wizards, astrologers, fortune-tellers, and healers replaced belief in the power of rational thought. The Church taught that certain realms were beyond the conception of women and men and could easily lead people into dangerous thoughts and beliefs. Study of scripture was thought to be the best use of energies of the brightest. Individuals who questioned dogma were persecuted and intellectual curiosity was discouraged.

As the Middle Ages ended and the Renaissance began, an age of reason and science was more likely. The ability to think clearly, to see connections, to postulate new theories, and to develop new medical practices was seen as the result of individuals having varying degrees of "nervous energy" and not the direct planting of ideas by gods, spirits, or demons. Everyone was thought to have an exhaustible supply of nervous energy: wise individuals used their energy carefully – they were temperate, compliant, obedient, or adaptive. Mental illness was seen as any departure from normal behavior. From the early Renaissance to the beginning of the twentieth century, lunacy, madness, insanity and genius, giftedness, quickness, or a preponderance of intellectual facilities were equally viewed as types of madness or idiocy. This led to many writings in the eighteenth and nineteenth centuries that equated outstanding mental abilities with a morbid disposition, abnormal nervous afflictions, physical weakness, neuroses, and early burn-out of prodigious children and youth. Parents shielded their children from intellectual activity; you had to be careful not to use up your supply of mental energy too early. A common truism about encouraging early development of talent from the end of the period was, "early ripe, early rot."

It was in the late 1800s that the first scientific investigations of giftedness began. Francis Galton, an English lord and cousin of Darwin, developed investigations to discover the effect of heredity in natural ability. He found evidence from studying the families of eminent individuals, especially judges and clergy. He found that eminence did indeed run in certain families and concluded that intelligence must be hereditary. What Galton did not take into account was the effect of these men's upper class backgrounds on encouraging the emergence of talent. He did find that the men he identified did not fit the common conception of the neurotic gifted individual, "there is a prevalent belief...that men of genius are unhealthy, puny beings – all brains and no muscle – weak-sighted, and generally of poor constitutions... [my readers would be surprised at the stature of]... the heros of history who fill my pages."

Galton is also known for his work in trying to develop tests that would identify gifted individuals. His tests were not anything like the intelligence test we think of today, but were tests of physiological functioning designed to find who had the best nervous systems. The tests included measures such as physical strength, ability to note slight changes in the pitch of sounds or in sensitivity to changes in visual objects, color and perceptual discrimination, and reaction time. Galton

assigned numeric values to individual performances on these tests so the relative levels of their performances could be compared. Like today, the magic of numbers and measurements gave these measures more perceived importance than they deserved. American James Catell copied Galton's procedures at Columbia University in New York. His results were disappointing. When the tests were given under controlled scientific conditions, little or no connection was found between high scores and people who were gifted or talented or people who were mentally slow.

At about the same time in France, Alfred Binet, a psychologist, also tried to repeat Galton's experiments with the same lack of productive information. He soon realized that a few of the test items, those that called for reasoning and judgement, did differentiate among individuals. These items were better at telling individuals apart than were the physiological items used by Galton. In 1904, France passed a compulsory education measure and Binet was called on to develop tests to ensure "mentally defective" and normal children were not placed in the same classrooms. He and Theodore Simon arranged a set of thinking and judgement items from simplest to most difficult into a test. After testing many children of various ages, a normal score for each age level was found. The average score of children at any chronological age was called their "mental age." Children who passed tests a year or two below their age were designated inferior or retarded; a year or two above their age were designated superior or advanced. Their method of comparing students was awkward, though, making comparisons between children of different ages difficult.

In 1916 an American, Louis M. Terman at Stanford University, translated Binet's scales and renamed them the Stanford-Binet Intelligence Test. Terman used a method for comparing levels of mental ability among peoples of different ages. He defined the term Intelligence Quotient as mental age divided by chronological age. Then to get rid of the decimal points, he multiplied the quotient by 100 and eliminated any remaining decimal points. An average IQ at any age was 100 (for example a child with a mental age of nine divided chronological age of nine multiplied by 100 equals an IQ of 100). Eventually psychologists realized children and adults do not grow in their mental abilities at an even pace with their chronological growth. Today we report scores on intelligence tests in terms of how far from the average a score is (in standard deviation terms). So while we no longer calculate a quotient, the term intelligence quotient or IQ remains[23].

WHEN DID SPECIAL CLASSES FOR GIFTED OR TALENTED CHILDREN BEGIN?

In this country, special opportunities in school for the gifted and talented have had a roller coaster history. While all education seems to go round in cycles, the nature of treatment of gifted in American schools is probably the most pronounced of any group. Today this cycle continues in the debates over a commitment to excellence in education and equality in education. Promoting special opportunities for the gifted is seen as encouraging elitism since one group is privy to educational experiences denied to other children. Promoting egalitarianism guarantees increased attention to students from lower-status environments who are failing at school. Seldom in the debate do we hear about the intellectual or educational needs of the gifted and talented children involved.

An early and common option available for gifted learners was acceleration. In the 1700s and 1800s, grade promotion was not unusual; if you were bright, you joined the older children. St. Louis Schools formalized this practice in 1868 by adopting policies allowing the acceleration of rapid learners; flexible promotion which used a promotion schedule allowing children to finish the first eight years early but still covering the entire curriculum sequence. The use of flexible promotion spread through the end of nineteenth century. In 1886, Elizabeth, New Jersey divided grades one through eight into three sections allowing gifted to move ahead. At the same time, similar programs were in place in Santa Barbara (the Concentric Plan), New York and Chicago (Constant Group System), and Cambridge, Massachusetts (Double-Track Plan). By the turn of the century, the New York City schools had added their Rapid Advancement Classes (today called the Special Progress classes), permitting students to complete three years of junior high in two. In 1901, Worcester, Massachusetts founded what is usually considered the first magnet school for the gifted (grades 7-9): special

[23]An interesting discussion of the uses and abuses of testing can be found in the following book: Gould, S.J. (1981). *The mismeasure of man*, New York: Norton.

classes in language and math were offered that received high school credit toward a diploma. Baltimore adopted a similar plan in 1902. Stuyvesant High School in New York was created for boys with superior mechanical, mathematical, or science talent. In 1918, Louisville, Kentucky had one of the first experimental schools where students were accepted on the basis of Stanford-Binet scores. The students needed IQ scores of 120-168. Once there, the students worked at their own pace and covered elementary school in about half of the normal time. About the same time similar programs were implemented in New York City; Urbana, Illinois; Columbus, Ohio; and Berkeley, California. In all of these schools, the accelerated students covered all of the curriculum and did not skip materials.

After the first World War there was a change in American educational thinking. The Commission on Reorganization of Secondary Schools (1918) wrote the *Cardinal Principles of Secondary Education*, noting differences in students' needs and abilities. High school was seen as precollege training for some children but as the terminal education for others. There was concern for high-ability students, and acceleration was acceptable, but they were concerned that school was neglecting to develop students' capacity for broader and deeper understandings. Questions were raised about the advisability of removing students from age-peers and placing them in classes with older students. Enrichment rather than acceleration became the preferred practice. Leta Hollingworth (1920s) was convinced that enrichment rather than acceleration best served the needs of most gifted elementary students, although she also acknowledged the need for accelerative options for the most talented. Hollingworth developed enrichment units that prefigure the lessons taught in many gifted programs today.

During the 1920s, many schools substituted ability grouping for acceleration as the favored method of serving the gifted and talented. In 1929, about two-thirds of all schools in America had some form of ability grouping although it is not known how many of these groups served the needs of the gifted and talented and how many served the needs of other student groups.

By 1930, only 30 out of 762 U. S. cities with populations over 10,000 had special classes for the gifted. Those schools with special programs often had enrichment in special classes followed by enrichment in regular classes.

World War II increased interest in acceleration as highly trained individuals were needed in the defense industry as soon as possible. By the end of the war and the return of the servicemen, positions in colleges were scarce. It was no longer desirable to accelerate a large pool of youth. During the late 1930s through the early 1950s, little was done or written about educating the gifted and talented.

The National Association for Gifted Children began in the 1950s. The National Education Agency held strategy sessions reflecting an increased interest in educating the gifted. America's education of the gifted received one of its biggest boosts with the launching of the Russian satellite Sputnik in 1957. America at that time expected themselves to be the world leaders in technology and production. Sputnik, launched by our arch enemies, shocked the nation. We saw a need for scientific and intellectual development as a strategic necessity. The specter of becoming a second class nation frightened policy makers. Gifted education became linked to national defense. The National Defense Education Act of 1958 funded six areas for educational improvement. One of the six was the identification of gifted youngsters. Money for schools to begin programs in science, math, and foreign languages was provided. Private foundations also helped. For example, the Ford Foundation funded an Early College Entrance Program at several major universities.

During the 1960s, the emphasis in education shifted again from focus on science and mathematics to equity issues and concerns about the social and emotional development of all children. Gifted programs faded away or were eliminated in many schools. Science and innovation began to be viewed less as a savior of the race and more as a curse. War protests, rejection of the "military-industrial complex," and a shrinking job market reduced the interest in gifted and talented education.

Interest renewed in the 1970s, led by the Congressional mandate of provisions for gifted and talented children that was added to the 1969 Elementary and Secondary Education Amendments. This allowed gifted students to receive help from Title III and Title IV programs. In 1971, the Marland Report[24] was written. The Office of the Gifted

[24]See Section I, page 2 for more information on the Marland Report.

and Talented, in the U.S. Office of Education, Bureau of the Handicapped, was created in 1974 and funded for $2.56 million in 1976.

In the 1980s, the Office of Gifted and Talented was dissolved and special funds redistributed to schools with less specific federal mandates about their uses. Much research and numerous gifted program models were developed during this time. Many programs in schools today began then. In 1989, the federal government again offered funding for research on gifted and talented. The Jacob Javits Bill authorized funds for this purpose.

G/T PROGRAM MODELS AND OPTIONS

GROUPING

You may hear about different kinds of models or options being offered in your child's school or in the schools of other children. The following is a description of many of the common grouping practices used in gifted and talented programs. There is much discussion about the merits of grouping occurring in our schools today. Is it right to separate children by their educational talents and needs? The Texas Association for the Gifted and Talented has taken a position in this debate. Their conclusions are based on the most appropriate ways to meet the educational needs of all children including the gifted and talented[25].

TAGT Position Statement On Grouping

The Texas Association for the Gifted and Talented believes that the most effective way to serve gifted students is to group gifted learners with their intellectual peers and to provide appropriately designed curriculum that addresses the learning and affective needs of this unique population.

The Texas Association for the Gifted and Talented believes in educational practices that address the needs of all students. The Association does not consider programming to meet the special learning needs of gifted and talented students as simply a grouping issue. However, many educators continue to discuss gifted programming within the arena of this issue; therefore, it is important for us to appropriately address these concerns. It is unfortunate that in the name of reform, gifted programming is often the victim, when the real culprit appears to be the inequity of hard line tracking of lower academic ability students. It is important to note that in this discussion, the terms grouping and tracking are not synonymous.

Grouping is defined as the regrouping of students for instruction that has been specifically designed (e.g. differentiated) for that particular group. Effective grouping supports the moving of students in and out of these groups as their needs and performance change. Tracking is defined as the locked-in placement of students in a more or less permanent group with few opportunities to move into higher level groups despite increasing performance. Tracking is not endorsed or supported by the Texas Association for the Gifted and Talented.

Current efforts to restructure our schools have sometimes included the elimination of accelerated classes and enrichment programs for the gifted and talented, in the name of reform. "The Research" has been cited as the rationale for this elimination. However, a more careful reading of this same research presents a very different picture. In fact the researchers most often cited (Slavin, Kulik & Kulik, and Johnson & Johnson, *et al.)* specifically state either that special classes for the gifted and talented were excluded from the studies or that the research shows positive results for special grouping of high ability and/or gifted students.

The Texas Legislature in 1987 mandated that every school district identify and serve gifted and talented students in kindergarten through grade 12 (HB1050: Texas Education Code, Section §21.652). In addition Chapter 75.1 of the Texas Administrative Code reads "Public elementary and secondary education is responsible for providing each student with the development of personal knowledge, skill, and competence to maximum capacity (Texas Education Agency, 1998R.3.)" in order to develop gifted students to their maximum capacity. TAGT believes that gifted students must have the opportunity to work on a regular basis in the three different learning environments as required by the Texas Administrative Code: "...school districts must provide a full year program that includes instructional and organizational patterns

[25]The winter 1993 issue of TAGT *tempo* was devoted to the subject of grouping.

that enable identified students to work together as a group, to work with other students, and to work alone (TAC 19, 89 52.a5).

TAGT further recognizes the value of the *Recommendations for Practices Involving Ability Grouping* by Dr. Karen B. Rogers, which are based on conclusions drawn from her research synthesis.

Guideline One: Students who are academically or intellectually gifted and talented should spend the majority of their school day with others of similar abilities and interests.

Guideline Two: The Cluster Grouping of a small number of students either intellectually gifted or gifted in a similar academic domain. within an otherwise heterogeneously-grouped classroom can be considered when schools cannot support a full-time gifted program (either demographically, economically, or philosophically).

Guideline Three: In the absence of full-time gifted program enrollment, gifted and talented students might be offered specific group instruction across grade levels, according to their individual knowledge acquisition in school subjects, either in conjunction with cluster grouping or in its stead.

Guideline Four: Students who are gifted and talented should be given experiences involving a variety of appropriate acceleration-based options, which may be offered to gifted students as a group or on an individual basis.

Guideline Five: Students who are gifted and talented should be given experiences which involve various forms of enrichment that extend the regular school curriculum, leading to the more commonplace development of concepts, principles, and generalizations.

Guideline Six: Mixed-ability Cooperative Learning should be used sparingly for students who are gifted and talented, perhaps only for social skill development programs.

(For a comprehensive discussion of this research, please consult the research synthesis study of Dr. Karen B. Rogers: *The Relationship of Grouping Practices to the Education of the Gifted and Talented Learner*; published in 1991 by the National Research Center on the Gifted and Talented.)

You may get involved in the debate over grouping of students in your school. Often parents and educators who favor grouping of students are confronted by school officials who describe the dire results that "research has proven" occur when grouping is used. These officials often do not distinguish between grouping and tracking. Grouping means placing students in educational settings that have curriculum specifically designed to challenge them and meet their needs. Tracking, on the other hand, is the practice of placing students in top, middle, or low classes and never letting them advance to higher tracks despite increased performance. Appropriate grouping, not tracking, has been found to greatly benefit many students, including the gifted and talented.

Critics of tracking and – by reason of association, grouping – often cite the work of Jeannie Oakes or Robert Slavin as demonstrating that tracking is ineffective and discriminatory. The research evidence doesn't really support their conclusion about grouping when used appropriately. Parents who favor grouping often feel uninformed about the issues and are not sure what to read to better understand the arguments put before them. It is difficult to debate from a position of ignorance. Individuals who are debating the abandonment of grouping in their schools would be well advised to prepare themselves beforehand by reading more about the issues[26].

Some of the best research on the topic of grouping for gifted and talented students comes from James and Chen-Lin Kulik[27]. Five guidelines they propose for making decisions about the use of grouping for gifted and talented learners are[28]:

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[26] See the section of the annotated bibliography on page 50 of this handbook for articles about grouping of gifted and talented students.

[27] See their chapter in the *Handbook of Gifted Education*. This chapter represents the best synthesis of grouping data on gifted students.
Kulik, J.A. & Kulik, C.C. (1991). Ability grouping and gifted students. In N. Colangelo and G. Davis, (Eds.) *Handbook of gifted education* (pp. 178-196). Boston: Allyn and Bacon.
The Kuliks have also reported their research work in earlier articles:
Kulik, J.A. & Kulik, C.C. (1987). Effects of ability grouping on student achievement. *Equity and Excellence*, 23(1-2), 22-28.
Kulik, J.A. & Kulik, C.C. (1987). In defense of tracking. *Educational Leadership*, 44(6), 24-26.

[28] The research-based conclusions for decision makers on ability grouping are written by James Kulik and published by The National Research Center on the Gifted and Talented. The Center's address is: The National Research Center on the Gifted and Talented, The University of Connecticut, 362 Fairfield Road, U-7, Storrs, CT 06269-2007.

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• Although some school programs that group children by ability have only small effects, other grouping programs help children a great deal. Schools should therefore resist calls for the wholesale elimination of ability grouping.

• Highly talented youngsters profit greatly from work in accelerated classes. Schools should therefore try to maintain programs of accelerated work.

• Highly talented youngsters also profit greatly from an enriched curriculum designed to broaden and deepen their learning. Schools should therefore try to maintain programs of enrichment.

• Bright, average, and slow youngsters profit from grouping programs that adjust the curriculum to the aptitude levels of the groups. Schools should try to use ability grouping in this way.

• Benefits are slight from programs that group children by ability but prescribe common curricular experiences for all ability groups. Schools should not expect student achievement to change dramatically with either establishment or elimination of such programs.

WHAT KINDS OF GROUPING ARRANGEMENTS ARE USED IN GIFTED PROGRAMS?

Several kinds of grouping arrangements are commonly used in gifted programs. Some of them are homogenous groupings, placing students of similar ability and needs in the same class without regard for their age. Students can be grouped based on common criteria such as academic ability, educational needs, interests, or special requirements. Homogeneously grouped classrooms contain students with a narrower range of abilities in the area of grouping; wide differences probably exist among these students in other areas. Other grouping arrangements are heterogenous, placing students of approximately the same age level in the same class without regard for the diverse educational and affective needs of the students, their learning styles, or their interests. Heterogeneously grouped classrooms contain students with a wide range of abilities.

Full-time homogeneous groupings

Magnet schools. These schools bring students with special abilities, talents, or needs together in one location. Magnet schools are most commonly found in larger cities. They may be organized to serve the needs of intellectually gifted children or creative children, or they can focus on students seeking training in certain trades or careers (e.g., Gifted Magnet School, Engineering Magnet School, Medical Career Magnet School, Visual and Performing Arts School). Students are usually bused in from all corners of the city or area.

School-within-a-School. As in magnet schools, students attend the school-within-a-school from all parts of the city or area. Unlike a magnet school, these are regular schools for neighborhood children and a small section of the building is set aside for the gifted group. The gifted classes become a special school-within-a-school. They have their own teachers and curriculum but often mix with the students in the rest of the school for nonacademic subjects (e.g., art, music, physical education) or for sports, recreation, or social events.

Special Classes. Gifted students comprise an entire section of a grade or class. At the elementary level, this might be one section of a grade class containing the gifted students from that neighborhood. At the secondary level, it includes advanced level or college preparatory classes in science, literature, art, music, languages, etc. The special classes at all levels focus on advanced content, fast-paced learning, use of higher-order thinking skills, and critical analysis.

Full-time heterogenous groupings

Multi-age classrooms. These are combination grades (e.g., students from grades five and six combined in a single room). In this setting the fifth graders might receive a limited form of acceleration by being able to participate in some sixth grade activities or lessons. Multi-age classrooms facilitate individual and small group instruction.

Cluster grouping. When there are not enough gifted students to make an entire section of a grade or class, an alternative is to cluster them together in one of the existing classes. For example, one section of third grade would be home to all the third graders identified as gifted by the district. This arrangement allows the students to have higher level instruction with the teacher meeting with the cluster group for certain subjects. Often students in cluster group classrooms do independent study and research. They have the opportunity to work closely with other gifted and talented students for large portions of their school day.

Inclusion or Mainstreaming. This practice refers to placing all students, including those with unique abilities or needs, into the same heterogeneously grouped section or classroom. The regular classroom teacher attempts to modify the curriculum to meet the needs of the gifted and talented and the special education students in her room. This method of grouping students makes meeting their needs quite difficult. The range of abilities and needs is tremendous. Although some teachers do a respectable job addressing each child's needs, in many situations there is just not enough time or resources to adequately meet the needs of the most able, the average, and the least able students at the same time.

Part-time groupings

Pullout programs. Participating students leave their regular classroom for a period of time each week, often quite short (one to two hours). They meet a special teacher in a resource room. There they participate in differentiated learning experiences often involving creative or critical thinking, research, personal development, or independent projects. Often the content of the pullout program's curriculum is independent of the regular classroom curriculum.

Grouping for subjects. Students are grouped for instruction within or across classrooms based on their abilities in that subject. For example, the top math students in grade five might all meet for math in one fifth grade teacher's classroom. To make room for the students from other sections, some of the teacher's regular students would go to other teachers for math class. The same kind of process could occur within a single teacher's classroom. Students within the class could be grouped by ability for reading, language, mathematics, etc. A variation on ability grouping by content areas is cross-grade grouping, sometimes called a Joplin Plan. In this form of grouping by subject, students from multiple grade levels are grouped according to ability[29].

WHAT DO ENRICHMENT AND ACCELERATION MEAN?

Enrichment and acceleration are terms that describe the orientation of the curriculum in classes. Enrichment is often seen as expanding horizontally the content and activities usually done at a certain grade or class. Acceleration is a more rapid movement through the content, a vertical movement through grade levels or content areas. Acceleration is a poor choice of terms. It seems to imply speeding a child up and making her do work faster than she should. A better term for the practices we call acceleration is matching. Student's instruction is matched to their ability. Noted child developmentalist David Elkind described the process not as accelerating the child, which is not developmentally possible, but of matching a child to his or her appropriate instructional level:

> *What has been accelerated is the child's progress through the school curriculum. But this can be looked at a different way, not so much as acceleration but as TAILORING. What promotion does for intellectually gifted children is to make a better fit between the child's level of intellectual development and the curriculum.*

Both acceleration and enrichment are important strategies for meeting the educational needs of students. Using one should not exclude the use of the other.

LABELING

The issue of labeling versus identification and placement is important. The identification of children for gifted programs should involve a process of matching student needs to program options. Schools overtly or covertly define what they mean by gifted and talented in that school or district. Students who fit that description should be sought. This should not be thought of as labeling. We define labeling as bestowing a title on a child. Identification is not a process that distinguishes the "bright" from the "gifted." Those terms are sometimes used to label children. Unfortunately the labels have little or no concrete meaning. Both terms are used so freely that the differences, if there are any, are not useful. A more important consideration is to identify the specific areas in which the child is bright, or gifted, or talented, or creative.

[29] An often-quoted critic of ability grouping, Dr. Robert Slavin, has noted the effectiveness of Joplin-type plans if teachers provide specific regular instruction rather than letting students work more or less on their own. Schools considering grouping should read:
Gutiérrez, R. & Slavin, R.E. (1992). Achievement effects of the nongraded elementary school: A best evidence synthesis. *Review of Educational Research*, 62(4), 333-376.

HOW ARE STUDENTS IDENTIFIED FOR GIFTED PROGRAMS?

Identification is a process of placing children in programs or options that address their needs. Identification should follow directly from the school's definition of gifted and talented children. The best identification procedures have a clear and direct link to the characteristics of talent specified in the school's definition.

Often identification begins with some sort of screening or referral process. Schools may look at existing records or group test data. They might solicit referrals from parents, teachers, students, or community members. The students found in this phase of the identification process often are given new tests[30]. Parents and teachers complete rating scales on the children[31].

Once all of this data is gathered, a decision must be made about who should be placed in the gifted program or program options. The data from these ratings, new tests, and old tests or grades are often combined. One widely used method for combining the data is through the use of a matrix (see example of an identification matrix on page 33). A matrix is an array of rows and columns where student scores are combined and totaled. It provides a method for synthesizing all the different data. Often a single number or total matrix score is generated. Students are then placed or not placed based on that number.

There are problems that often occur when a matrix is used for combining scores[32]. The first is one of mixing apples and oranges. What does the total score mean? It is a hodge-podge of various kinds of information. Secondly, using a matrix may discriminate against some students because of where their scores happen to fall. For example, two imaginary students at the school that used the matrix below had almost identical scores, Jan was always one point below Jane in each of the six assessments. For all intents and purposes, the two girls have scored the same. The small differences are not educationally significant. If their scores were inserted into the matrix for consideration for the gifted and talented program, they each would receive the following scores:

Jane has a 25 while poor Joan only has a 19. The only thing that has changed is the use of the matrix. It has taken a trivial difference and made it significant. Jane was placed in the program but Joan was not.

A better approach would involve looking at measures directly related to the program being offered. If it was a math program, then the identification might include the quantitative and spatial-scaled scores from an abilities instrument, one or more math achievement scores, a math-related rating scale, or performance in special mathematical activities[33]. If comparisons to other students are needed, convert the scores to standardized scores (for example t-scores or z-scores) rather than use a matrix. Using standard scores avoids the problem Jane and Joan experienced when their scores where added using a matrix.

	OTIS-LENNON	READING	MATH	COMPOSITE	LEARNING	MOTIVATION	TOTAL SCORE
JANE IDENTIFIED	120	90	95	90	32	32	25
JOAN LOSTOUT	119	89	94	89	31	31	19

Student portfolios are being used in some schools as part of the identification process. A portfolio is a collection of student products used to measure student progress and achievement. Materials in a portfolio may be prescribed by the program or be student-selected.

[30]The various kinds of scores have been defined in the Glossary of 'Educationese' at the end of this handbook.
[31]See the footnote 5 on page 3 for one example of a parent rating scale used for identifying gifted and talented elementary students.
[32]See James Borland's chapter on identifying gifted students in:
Borland, J.H. (1989). *Planning and implementing programs for the gifted.* New York: Teacher College Press.
[33]Assessments that have the student participate in a process, produce a product, or solve a puzzling problem are often called authentic assessment. They provide an alternative to traditional standardized tests allowing students to be evalutated with regard to their individuality and creativity.

SECTION III: HOW DO SCHOOLS MEET THE NEEDS OF THE GIFTED AND TALENTED?

Sample ISD, Gifted/Talented Education Program, Language Arts

STUDENT PROFILE

STUDENT ID #:_____ GRADE:_____ BIRTH DATE:_____ AGE:_____

NOMINATION(S) FROM: TEACHER PARENT TEST OTHER DATE:_____
(Circle appropriate ones)

	RANGE	LOW	AVERAGE	ABOVE AVERAGE	HIGH	SUPERIOR
	Standard Deviation	Below the mean	Mean to +.49	+.5 to +.99	+1.0 to +1.49	+1.5 and above
	Percentile Ranking	0 to 49	50 to 68	69 to 83	84 to 92	93 to 99+
	T-Scores	Below 50	50 to 54	55 to 59	60 to 64	65 and above
	Ranking	Below 50% of students	Top 50% of students	Top 30 % of students	Top 16% of students	Top 7% of students
	Writing Sample	1	2	3	4	5
CRITERIA	1. California Achievement Test – Reading Subtest Score – Local Norms			DISTRICT LINE		
CRITERIA	2. California Achievement Test – Language Subtest Score – Local Norms					
CRITERIA	3. Renzulli Scale on Learning (I)					
CRITERIA	4. Renzulli Scale on Creativity (II)					
CRITERIA	5. Writing Sample					
CRITERIA	6. Otis-Lennon School Ability Test Nonverbal Score Local Norms					
OPTIONAL	7. Grade Point Average _____ Time span					
OPTIONAL	8. Portfolio # of items_____	Low	Average	Above Average	High	Superior

DECISION OF COMMITTEE

_____ Automatically accepted (at least 5 criteria above district line).
_____ Considered and accepted (at least 4 criteria above district line).
_____ More information needed. Reconsider on _____ Date
_____ Not accepted at this time.

(Note: A circle around a score indicates it is very close to being in the next higher column. Committee should consider the standard error of measure of the criteria.)

Above matrix developed by Judith Martin, Education Service Center, Region XX

HIGH POINTS OF THE STATE MANDATE AND THE STRUCTURE OF GIFTED EDUCATION IN TEXAS

In 1981, the Texas legislature mandated that every district would have provisions for gifted students kindergarten through grade 12 beginning with the 1990-91 school year [34]. The state allows individual districts to design and implement the exact nature of these programs. The goal of these programs is to:

> *identify all students with exceptional ability or potential for exceptional ability in one or more of the following areas: general intellectual ability, specific subject matter aptitude, creative and productive thinking ability, and / or leadership ability; and to provide them with planned programs that are offered by professionals trained in gifted education.*

HOW DOES THIS GOAL GET CARRIED OUT?

The process of providing educational experiences that meet the needs of all children including the gifted and talented begins in the legislature. The legislature passes the statutes that govern education and educational policy for Texas. These statutes then go to the State Board of Education (SBOE) where they are interpreted and the rules are established.

In accordance with SBOE rules, the Texas Education Agency (TEA) then develops administrative guidelines to implement the state or federal legislation. TEA staff and the Division of Gifted and Talented develops materials designed to help districts identify gifted students and to develop programs. They conduct staff development for local educators in compliance and quality accountability for gifted programs. TEA works with institutions of higher education and through the Education Service Centers (ESC) to plan training for teachers and future teachers and to encourage research and development activities. The Agency also monitors school districts for their compliance with state guidelines and for their ability to offer excellent programs for gifted and talented students. There are 20 Regional ESCs throughout the state. They support the efforts of TEA and assist local school districts with the development and improvement of their gifted programs. Finally, local school districts comply with the mandates of the state and with the expectations for the maintenance of excellence in programs including gifted programs.

HOW WILL EXCELLENCE IN GIFTED PROGRAMS BE ASSESSED?

Recently, the state initiated a quality control program for gifted programs. These new accountability standards delineate and explain to districts what compliance with state statutes entails. They were piloted during the 1992-93 school year. In the course of six years, all districts in Texas will receive a monitoring review. In the fall of 1992, the excellence indicators included as part of a program called **Results-Based Monitoring** were:

I. Academic Excellence Indicators
   - A. Ninety percent of all gifted students obtain a passing score on each of the three sections of the Texas Assessment of Academic Skills (TAAS).
   - B. Ninety-seven percent average attendance by gifted students within a three year period.
   - C. One-half of one percent drop-out rate or less among identified high-school gifted students over a five year period.
   - D. Ninety percent of gifted students complete advanced courses.
   - E. Ninety-nine percent graduation rate for gifted high-school students.
   - F. Ninety percent of students in gifted programs will graduate with an advanced seal on their transcript.
   - G. Ninety percent of gifted students will take college admissions examinations.
   - H. Ninety-nine percent of the gifted high-school students receive a Scholastic Aptitude score of 1000 or above or 25 or above on the ACT.

II. Program Excellence Indicators
   - A. Family and Community Involvement
     1. A minimum of two efforts will be made to distribute information to parents that assist them in understanding and accessing special programs for the gifted in their district.
     2. The materials on assessment for gifted programs and the programs themselves will be available in the dominant languages of the district.

[34] For a complete description of the state mandate, see: *The Texas State Plan and Guidelines for the Education of the Gifted/Talented.* This document is available through the Publications Distribution Office of the Texas Education Agency, 1701 North Congress Avenue, Austin, TX 78701-1494.

3. Family and community support is solicited and maintained by the site-based committee. Parent association or district support groups meet at least twice a year.
4. Site-based decisions committees solicit information about and use research on gifted students to develop recommendations and services for gifted children.
5. Parents and community members serve in an advisory capacity regarding program services for gifted students.

B. Access
1. Nominations for program services are accepted from a variety of sources including parents, counselors, teachers, peers, and students themselves, as well as through a review of test scores and student performance. At least 50 percent of the nominations should come from sources other than test scores.
2. Nominations are ongoing (K-12), solicited, and reviewed to determine if additional students require services offered to gifted students.
3. All students at the kindergarten level are considered for nomination for advanced services. Portfolio or other performance data is maintained on 100 percent of kindergarten students.
4. Nominated students reflect the demographics of the district and include those from special programs serving migrant, bilingual, and special education students. These groups will be represented in proportions equal to the campus/district populations.

C. Student Eligibility
1. Student assessment reflects a holistic approach that includes multiple and diverse criteria. More than five criteria must be used reflecting objective, subjective, traditional, and non-traditional measures; data is reviewed by a committee with members representing different roles in the district.
2. The process for appealing decisions regarding student placement is widely disseminated, and appeals are promptly reviewed and processed.

D. Implementation
1. Program services are based on student needs and reflect identified areas of student strength.
2. Curriculum content for students identified as gifted is defensibly differentiated from the regular curriculum in its complexity, depth, and range. Teachers must receive training and materials to deliver curriculum focusing on complex content, issues, and themes.
3. Products developed by students identified as gifted are meaningfully related to the differentiated content and require complex thinking and independent effort. Products use new techniques, propose new ideas, and are evaluated by self, peers, and outside experts. One hundred percent of the identified students will be offered opportunities to self-select areas of study and will be provided support in developing in-depth products.
4. One hundred percent of the students use above-level, challenging materials that support the differentiated curricular objectives.
5. Students identified as gifted in elementary, middle, and high school will participate in experimental and/or innovative courses, services, and options specifically designed to challenge students of exceptional ability, interest, and motivation. Operationally, this is defined as 15-20 percent of elementary, 30 percent of middle school, and 50 percent of high school students participating in services such as: Future Problem Solving, Odyssey of the Mind, talent search programs, mentorships, or curricular-based community programs.
6. Students and families are informed of and encouraged to pursue options offered through Chapter 75 [35] that are appropriate for gifted students. Districts must provide 100 percent of students and parents with information on services such as advanced placement examinations, concurrent enrollment, and credit by examination.
7. One hundred percent of middle school students who score 1000 or above on the SAT or 25 or

[35] Chapter 75 refers to the State Board of Education's Rules for Curriculum. In this "Chapter," the State Board lists all of the essential elements for courses for grades K-12 and the provisions for other services and opportunities, including correspondence courses, experimental courses, magnet programs, alternate schools, credit by examination, high school credit for college courses, advanced credit grades 7-12, advanced placement examinations, grade advancement, and encouragement of students to take advanced courses.

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above on the ACT receive counseling on advanced and diverse curriculum options.

8. One hundred percent of the students are provided options for special grouping and classes that maximize student potential. This includes multi-grade grouping, independent study, seminars, etc.
9. Time frames in which students participate in services designed for gifted are appropriate for meeting the desired student outcomes.
10. The affective needs of the gifted students are addressed, including 100 percent of the students being exposed to a multicultural curriculum.
11. Instructors delivering services as part of the gifted program receive more than the minimum professional development required in State Board of Education Rule (19 TAC §89.52(a)(2)). The number of teachers with their endorsement in gifted and talented education and the number of teachers receiving on-going training increases each year.
12. The instructors delivering services as part of the gifted program reflect the diversity of the district.

E. Transition

1. One hundred percent of parents of new students to the district receive materials on the district's gifted programs and assessment procedures.
2. One hundred percent of transfer students from gifted programs in other districts are automatically assessed for services and appropriately placed within six weeks of arrival.
3. Students receive a continuum of services within a district from elementary school through middle and high school.
4. Beginning in middle school, 100 percent of gifted students will receive a minimum of one counseling session per year regarding career and educational options.
5. Students confirm that services offered through the gifted program enhanced and supported later educational and professional opportunities.
6. Exiting students from the program is based on multiple criteria relating to performance in the program and involves input from the student, teachers, parents, and counselors.

F. Support

1. Ninety-five percent of gifted program teachers should report adequate time for collaborative planning.
2. At least one representative from gifted education services will be included on all district-wide planning committees (such as technology planning committee).
3. One hundred percent of the district staff will have received introductory training on the needs and characteristics of gifted students.
4. Needs assessments are to be completed at least once every three years to determine the professional development needs of the campus staff.
5. Personnel delivering services that are part of the gifted program are included on grade level/subject area committees.
6. The district will expand or create new staff roles to ensure that the individual needs of all (including gifted and talented) students are met.

G. Evaluation

1. At least one component of the services for the gifted will be evaluated each year and the recommendations made will be implemented.
2. Parents, students, school personnel, and community members assess the effectiveness of programs and services for gifted students (at least 75 percent return district-wide surveys).
3. Performance of individual students is assessed appropriately to determine if program services are challenging student potential and these assessments are the basis for modifying services offered in the gifted program.
4. Evaluation results, including campus improvement plans, will be used to plan improvement to the gifted program.
5. At least 85 percent of the students in gifted programs will master all objectives on TAAS.

SECTION IV: WHAT RESOURCES EXIST FOR UNDERSTANDING AND HELPING GIFTED AND TALENTED CHILDREN?

SERVICES AVAILABLE THROUGH TAGT

CONFERENCES

- Annual Conference in November where over 5000 participants meet each other, attend information and training sessions, and find new resources.
- The summer Parent Conference is designed for parents. There are speakers, consultants, discussions, information, and networking. This is a must for all parents of gifted youngsters.
- Special division conferences, such as the yearly G/T Coordinators Conference
- Regional staff development training institutes

SCHOLARSHIPS AND AWARDS

- Advocates of the Gifted Awards, given annually to individuals in each of the 20 regions.
- The Carole Vermillion Scholarship for an Outstanding Parent of the Gifted and an Outstanding Teacher of the Gifted
- The Ann Shaw Scholarship for a gifted elementary and secondary school student
- Grants for Excellence Awards (special projects that benefit gifted students and gifted education in Texas)
- Research Grants and Fellowships
- K-6 Student Scholarships for summer programs
- 7-12 Student Scholarships for summer programs

PARENT SERVICES

- Annual Parent Conference
- Special sessions at the annual organization conference in November
- Networking
- Parent Affiliate Groups
- Access to TAGT's Speaker's Bureau
- Information and assistance

SPEAKER'S BUREAU

- A talent bank of speakers who have expertise in specific areas of gifted and talented education
- A list of Bureau members can be obtained from the TAGT Office

- Official journal of the organization, the TAGT *tempo*. The *tempo* is published quarterly. Each issue is devoted to a current topic in G/T education.
- Each year an *Insights* magazine in published. *Insights* lists summer programs for gifted students in Texas by region and gives a long listing of programs from around the nation. Application forms for scholarships are included in *Insights*.
- Numerous books, monographs, and resources are published by and available through TAGT. They include: *Identification of Gifted and Talented Students in Texas*, this parent handbook, *Curriculum Guide for the Education of Gifted High School Students*, a listing of gifted endorsement programs in the various universities in Texas, *Capitol News*, a monthly update during the legislative session, the Annual Conference Registration Catalogue, a documentary video entitled *The Need DEFINED: Gifted Education In Texas*, plus many more.

INFORMATION

- The TAGT office is always available to help you, answer your questions, or to point you in the right direction for more help. They can be reached at (512) 499-8248, FAX (512) 499-8264, or on TENET (accessible through BITNET, INTERNET, and other networks). The TENET address is: cjm@tenet.EDU.

ORGANIZATIONS TO CONTACT FOR HELP

Texas Association for the Gifted and Talented (TAGT), 406 East 11th Street, Suite 310, Austin, Texas, 78701-2617, (512) 499-TAGT (8248). This Texas association serves as an advocate of gifted children and youth. They provide information and assistance to parents, schools, universities, and other interested individuals and organizations in serving the needs of gifted children. They publish a quarterly journal called the TAGT *tempo*, and various other publications. There are active parent components with special parents activities. Each fall, a statewide conference is held. Each summer a special parent conference is held.

Texas Education Agency (TEA), The Division of Gifted and Talented, 1701 North Congress Avenue, Austin, Texas 78701-1494. (512) 463-9455 or 9524.

Texas Legislature. To get information on legislators and updated information, call the State Hot Line at (800) 253-9693 during legislative session at regular hours and any time the legislature is in session. In Austin, call (512) 463-1251. Regular hours are Monday through Thursday, 8 AM to 6 PM and Fridays, 8 AM to 5 PM. To write to your Senator, contact: The Honorable (Full Name), Texas Senate, P. O. Box 12068 – Capitol Station, Austin, Texas 78711. To write to your Representative, contact: The Honorable (Full Name), Texas House of Representatives, P. O. Box 2910, Austin, Texas 78769.

National Association for Gifted Children (NAGC), 1155 15th St., NW, Suite 1002, Washington, DC 20005. (202) 785-4268. NAGC is the largest national group organized on behalf of gifted and talented children. It sponsors conferences and workshops, disseminates information, and publishes materials of interest to parents and teachers of the gifted. Members receive a subscription to *Gifted Child Quarterly* and the membership newsletter.

The Association for the Gifted (TAG) is a division of the Council for Exceptional Children (CEC), 1920 Association Drive, Reston, VA 22091. TAG holds its annual conference in conjunction with the national CEC meeting, and disseminates information about gifted and talented children. *The Journal for the Education of the Gifted* is the professional journal of TAG

A GLOSSARY OF 'EDUCATIONESE'

As a parent, you can feel pretty incompetent and powerless when you don't understand the meaning of the 'educationese' that is used to describe your child. These terms include descriptions of gifted children, tests and test abbreviations, testing terms, educational practices, models, etc. The following glossary has been assembled to help you better understand your child before or after you meet with school officials.

AAAA

ABILITY GROUPING: Grouping students by need, interest, or ability. Groups can be formed and reformed to meet varied instructional purposes. All students need to participate in both homogeneous and heterogeneous grouping patterns. Ability grouping is NOT synonymous with "tracking." (See also HETEROGENOUS GROUPING, HOMOGENOUS GROUPING, and TRACKING.)

ABOVE-AVERAGE: A "normal distribution" of students is shaped like a bell curve. If 100 student scores are plotted on a graph, a bell curve would likely be generated. Most of the scores earned by the students would fall in the middle of the curve. Average scores are those in the middle two-thirds of the curve. Students who earn scores above the average scores are above-average. Compared to the other 100 scores, their scores are better than 85 percent of the scores. In contrast, scores earned by "gifted" students are considered to be those in the top 5 percent. Compared to 100 students, gifted students earned scores that were better than 95 percent of those students.

ABOVE-LEVEL TESTING: Giving a test that was developed and normed for students who are several years older. Also called out-of-level testing or beyond-level testing. (i.e., seventh graders who take the Scholastic Aptitude Test (SAT). The SAT was developed for eleventh and twelfth graders.)

ACADEMIC EXCELLENCE: Expecting each student to work at maximum level toward a set of external standards as defined by the state, district, and/or school. Learning and performing for each student should be at a challenge level commensurate with each student's skills and developed abilities.

ACCELERATION: Moving faster than is typical through school levels or curriculum. Perhaps acceleration is a misnomer; what is really happening is not acceleration of the student, but appropriate matching of a child with advanced aptitude and the level of education the child needs. This can be accomplished by entering kindergarten, first grade, or college early ("early admission"), skipping an entire grade ("grade skipping"), finishing several years of school at one time ("telescoping"), or advancing in a subject area more rapidly than is typical ("subject matter acceleration").

ACHIEVEMENT TEST: Test usually given to students after completing a course or topic. It is used to evaluate students' accomplishments. Results from achievement tests are also useful for adapting instruction to individual needs because examiners can determine what topics a student does or does not know. Examples of commonly-used achievement tests include: Iowa Tests of Basic Skills (ITBS), Norm-Referenced Assessment Program for Texas (NAPT), American College Testing Program (ACT), Comprehensive Testing Program II or III (CTP II, CTP III).

ADVANCED PLACEMENT: A program in which a secondary student can gain college credit and/or advanced college placement. Advanced placement is obtained by successfully meeting criteria established by higher education institutions on nationally-given, scored tests, such as those in the Advanced Placement Program, College Level Examination Program (CLEP), or International Baccalaureate (IB) Program.

ADVOCACY: Presenting someone's case, defending him or her, and pleading on his or her behalf. With gifted children, advocacy almost always focuses on school issues.

AFFECTIVE EDUCATION: Teaching children to deal with feelings, values, and social interactions, and helping them develop positive self-images.

AFFECTIVE LEARNING: Incorporating into the curriculum opportunities for students to address values, attitudes, and appreciation of self and others.

ALTERNATE FORMS OF A TEST: Two or more tests containing different items that cover the same material at the same level of difficulty.

ANALYSIS: The fourth of six levels in Bloom's taxonomy. Analysis involves breaking down things or ideas into their component parts to better understand how they are put together. The student separates information. S/he identifies reasons, causes, and motives. The student uncovers the special characteristics of something and determines its distinguishing factors.

APPLICATION: The third of six levels in Bloom's taxonomy application involves using previously learned information to solve a problem. The student transfers information to a new situation. The student applies rules, methods, concepts, principles, laws, and theories in new settings.

APTITUDE TESTS: Used to predict performance in specific areas such as verbal comprehension, mathematical ability, mechanical aptitude, spatial relations aptitude, or nonverbal reasoning ability. Distinguishable from intelligence tests in that aptitude tests have more specific content (i.e., they measure only one or a few abilities rather than a wide variety of abilities).

APTITUDE: Capacity for learning; natural ability, talent. Aptitude can be general, such as school aptitude, or specific, as in mathematics aptitude. It is possible to have high aptitude in one area and average or below average aptitude in another domain.

AT-RISK: Students who may underachieve or who may drop out of school. Unmet economic, physical, emotional, linguistic, and/or academic needs may inhibit a student's ability to learn or attend school.

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ATTRIBUTE BLOCKS: Colored shape blocks which are used in activities emphasizing attributes, deductive thinking, and logic.

ATTRIBUTE LISTING: An advanced creative problem-solving strategy that uses a chart format to facilitate (1) breaking a problem down into its component parts or essential attributes and (2) brainstorming solution ideas for each part or attribute analyzed as well as for the problem as a whole. Often used to improve an object or idea.

AUTHENTIC ASSESSMENT: Process of evaluating student learning using student products or performance instead of traditional standardized tests. It allows students to be evaluated with regard to their individuality and creativity. (See also PORTFOLIO ASSESSMENT.)

BBBB

BIONICS: Technique for problem solving which looks at nature to observe ways in which things in nature function. Example: camouflage in insects or radar in bats.

BLOOM'S TAXONOMY: A classification system for thinking and reasoning:
LEVEL 1 - Knowledge
LEVEL 2 - Comprehension
LEVEL 3 - Application
LEVEL 4 - Analysis
LEVEL 5 - Synthesis
LEVEL 6 - Evaluation
(See also the individual terms for a description of each level.)

BRAINSTORMING: A group activity that stimulates creative thinking. The goal is to come up with as many ideas related to a topic as possible. The main principle is deferred judgment. All ideas are accepted without criticism. After the brainstorming is over, ideas are evaluated.

CCCC

CEILING EFFECT: Occurs when a test does not have enough difficult items to measure a student's abilities accurately. Students who get all or almost all of the items right on a test are said to have reached the "ceiling" of the test. If the test does not have an adequate ceiling for gifted children, they will cluster at the top scores of the test and the power to discriminate between them will be lost. Also, if a student already scores near the ceiling on a pretest, it is extremely difficult to find improvement on a posttest score.

CHRONOLOGICAL AGE: The actual age of the child (years, months, and days).

CLUSTER GROUPING: A method for organizing a heterogeneous (mixed ability) classroom by assigning some students with similar needs, interests, and/or abilities to the same classroom for one or more specific learning experiences.

COLLABORATIVE LEARNING: A teaching strategy whereby students are expected to share expertise and effort in order to create a common project/product. Students in the collaborative group often have similar levels of ability. (Note: some educators use the terms collaborative and cooperative learning synonymously.)

COMPACTING: See CURRICULUM COMPACTING.

COMPREHENSION: The second of the six levels in Bloom's taxonomy, comprehension involves the student in explaining material in his or her own words. The student communicates information or an idea in a different form that demonstrates internalization and understanding.

CONTENT ACCELERATION: A type of acceleration that gives the child more advanced subject matter without necessarily changing grade placement (i.e., a mathematically talented sixth grader might take algebra I while remaining in sixth grade for other classes).

CONTENT/PROCESS/PRODUCT/THEMES: The elements of curriculum. Content is the subject matter. Process is the skill included in the curriculum. Product is the output of learning or form of communication, such as writing, illustrating, performing, debating, etc. Themes are a way of organizing content across multiple disciplines and for seeing the content in more abstract terms.

CONTRACT: A form filled out by the student and teacher, which states an agreement of expectations and goals for study over a set period of time.

CONVERGENT THINKING: Systematic reasoning focusing on one correct answer. This includes inductive and deductive reasoning, inquiry, and logic.

COOPERATIVE LEARNING: The practice of assigning a common task and/or project to a group of students with varying ability levels often reflecting the full range of student achievement and aptitude. The purpose of such learning is to prepare students to live in a democratic society; to help them understand group membership and group dynamics; and to allow them to practice both leadership and follower skills. (Note: some educators use the terms cooperative and collaborative learning synonymously.)

CORE CURRICULUM: The common knowledge and skills to be learned by all students of a particular grade as determined and specified by a local school district. The state frameworks provide guidance to a local district in this decision-making process. In Texas these are called the Essential Elements (EE). EEs exist for each grade level and content area. They represent the minimum content required in Texas for each class.

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CREATIVE PROBLEM SOLVING (CPS): A model for solving problems through a step-by-step process which includes fact finding, problem finding, idea finding, solution finding, and implementation. Brainstorming and other strategies for the production of creative ideas are an integral part of the process.

CREATIVE THINKING: Open-ended, divergent, imaginative thinking; includes fluency, flexibility, originality, and elaboration.

CREATIVITY: The human attribute of constructive originality. It is the process of combining what exists into something new. The something new could be procedure, idea, or product relative to the individual. Creativity needs to be nurtured in the students to develop the abilities necessary to affect our society with new ideas and solutions to problems.

CRITICAL THINKING: The development of analytical thinking for purposes of decision-making. This includes using specific attitudes and skills such as analyzing arguments carefully, seeing others' points of view, reaching sound conclusions, and the higher levels of Blooms's taxonomy.

CURRICULUM COMPACTING: A method for eliminating unnecessary repetition of material already learned. What a student already knows is determined and then the student is allowed to move on. Students "buy back" school time that teachers plan for all students so they can "spend" this time in other more productive ways.

CURRICULUM-BASED INSTRUCTION (CBI): Performance is based upon mastery of the curriculum rather than on a standardized comparison with other students (which is a normative comparison).

CUTOFF SCORE: The score set (either by group or individual) on an IQ and/or achievement test below which a student is rejected for a gifted and talented program.

DDDD

DEFERRED JUDGMENT: Withholding judgment, evaluation, criticism, etc., until after ideas are generated in a brainstorming or listing activity. Judgment is delayed so that the flow of ideas will not be inhibited.

DIAGNOSTIC TESTING PRESCRIPTIVE INSTRUCTION (DT-PI) MODEL: A model for educating talented youth that is useful for determining specific strengths and weaknesses in a subject. This information is then related to instructional prescriptions. DT-PI model participants are first given aptitude tests. High-scoring students are recommended for further testing using above-level achievement tests. Instruction is prescribed based upon those test results. Students work on the topics they do not fully understand, and they spend little time on topics they already know well. After studying a topic, students are retested to assess their level of mastery.

DIFFERENTIATED CURRICULUM: Adapting the curriculum to meet the unique needs of gifted learners by making modifications in complexity, depth, or pacing. It may include selecting rather than covering all elements of a curriculum, depending on the individual needs of students.

DIVERGENT THINKING: Creative generation of many responses; open-ended thinking. Includes fluency, flexibility, originality, and elaboration, and is the opposite of convergent thinking.

EEEE

EARLY ADMISSION: A form of acceleration (appropriate matching) that allows a child or young adult to enter the next level of education early. It involves early entrance to kindergarten or first grade as well as early entrance to college. (See also TEXAS ACADEMY OF MATHEMATICS AND SCIENCE.)

EARLY GRADUATION: Leaving high school earlier than age peers. Early graduation is often accomplished through use of accelerated courses, advanced placement, college classes while in high school, advanced summer programs, or telescoping.

ELABORATION: The ability to add detail; to embellish things, information, or ideas.

ELITIST: Advocating the selection and treatment of people as superior in some way and therefore favored. Promoting appropriate and challenging programs for gifted and talented children is not elitism. Participation is not based on promotion of superiority, but on the participants' legitimate educational needs.

ENRICHMENT: Activities that supplement the core curriculum. Enrichment provides opportunities to study subjects or content not covered in the typical school curriculum and/or a more in-depth exploration of topics covered in the regular curriculum. Students participating in enrichment activities study richer and more varied content.

EQUITY: Fair and impartial learning opportunities and access to good teaching for all students. In order to meet educational needs at all levels of development, these opportunities should encourage and enable all students to develop their fullest potential.

EVALUATION: The highest level in Bloom's taxonomy. Evaluation involves judging the value of the material for a given purpose and defining the criteria that must be used. The student must judge the value of ideas, purposes, methods, or things, and defend his or her reasons based on definite criteria.

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FFFF

FFOE: Fluency, Flexibility, Originality, and Elaboration: elements of divergent thinking.

FLEXIBILITY: The ability to shift point of view or see alternate methods or answers; expressing different categories of ideas and looking at situations in different ways.

FLUENCY: The ability to give a number of responses for ideas in a situation; quantity is the goal. Studies show that generating a large number of ideas increases the likelihood of producing useful and/or original ideas.

FORCES RELATIONSHIPS: The mental forcing together of two or more unrelated objects or ideas in order to create a new idea or solution; a useful creative problem-solving strategy.

GGGG

G/C/T: Gifted, creative, or talented. G/C/T is also the name of a journal on gifted education, *Gifted Child Today* (formerly, Gifted, Creative, Talented).

G/T: Gifted and talented.

GRADE EQUIVALENT: Children's scores on tests are sometimes compared in terms of grade and month in the school year (i.e., 12-7 means grade 12, seventh month) to the performance of a typical child at a given level. However, caution needs to be used in drawing conclusions regarding most age-equivalent scores, as scores are usually extrapolations and not actually based upon performance. For example, a six-year-old who earns a grade equivalent of 12 years 7 months on a reading test has actually earned an age-equivalent score that is based upon an extrapolation of data, not upon an assessment of students in grade 12.

GRADE SKIPPING: A form of acceleration where a student advances from the current grade level to placement at least one year higher. Student who grade skip show educational needs across all content areas that can be more easily met in the higher grade placement.

HHHH

HETEROGENEOUS GROUPING: Placing students of approximately the same age level in the same class without regard for the diverse educational and affective needs of the students, their learning styles, or their interests. Heterogeneously-grouped classrooms contain students with a wide range of abilities.

HIGHER-LEVEL THINKING: Tasks and activities that require analysis, synthesis, or evaluation; complex, abstract thought.

HITCHHIKING: Using the idea of someone else to come up with one of your own. This is encouraged in divergent thinking exercises such as brainstorming.

HOMOGENEOUS GROUPING: Placing students of similar ability and needs in the same class without regard for their age. Students can be heterogeneously grouped based on common criteria such as academic ability, educational needs, interests, or special requirements. Homogeneously-grouped classrooms contain students with a narrower range of abilities in the area of grouping; wide differences probably exist among these students in other areas.

HONORS CLASS: A secondary-level (grades 7-12) course specifically designed to be advanced in content, process, product, or content organization. Traditionally, students who meet prerequisite criteria are accepted into these courses.

IIII

IDENTIFICATION: The process of selecting able children for differentiated program options. The selection often involves using multiple criteria.

IEP: Individualized educational plan; a system to design academic material tailored to the unique needs, interests, and abilities of a specific child. Often used in special education, but easily adapted to G/T uses.

IMAGERY: Mental images or pictures produced by the imagination; also, the metaphorical language which evokes such pictures.

INDEPENDENT STUDY OR SELF-DIRECTED STUDY: Allowing students to follow individual or self-selected areas of interest and specific aptitude by designing and implementing their own study plans. Close monitoring by teachers is an essential component of independent study.

INDIVIDUALIZATION: Providing a specific program that meets the particular needs, interests, and/or abilities of an individual student for some part of his/her educational experience. It does not mean, however, that every child is working in isolation on a different level or a different subject at all times. It does mean that students are working on levels commensurate with their assessed ability, needs, and/or interests.

INQUIRY: To ask about, investigate, examine; learning to ask productive questions.

INSTRUCTIONAL SCAFFOLDING: An apprenticeship approach to instruction which places the teacher in a collaborative, interactive role with students by providing carefully structured and sequenced support as they undertake new and more difficult tasks. Emphasis is on teacher modeling, extension, rephrasing, questioning, praise, and correction rather than on the teacher as evaluator.

INTELLIGENCE TEST: Designed to sample a wide variety of functions in order to estimate the individual's general intellectual level. Some example of individual intelligence tests include: Wechsler Intelligence Scale for Children-Revised (WISC-R), Stanford-Binet IV, Stanford-Binet (Form L-M), and Kaufman Assessment Battery for Children (K-ABC).

INTERDISCIPLINARY CURRICULUM: A curriculum that is structured to study a topic or concept by gathering and relating ideas from multiple disciplines.

INTERNATIONAL BACCALAUREATE (IB): A rigorous international pre-university course of study, leading to examinations that meet the needs of highly motivated and academically superior secondary-school students. IB has a comprehensive classics curriculum (languages, science, mathematics, and humanities) that allows its graduates to fulfill educational requirements of various nations. Only schools approved by the IB organization may offer the program.

IQ (INTELLIGENCE QUOTIENT): The score earned on an intelligence test. It is a measure of ability or aptitude at a given point in time. It is not a fixed quantity, but a changeable one. IQ is considered one of many ways to measure a student's potential. A high IQ score indicates giftedness, but a lower score does not automatically mean a child is not gifted. The average score on an IQ test is 100. The original formula for IQ was mental age/chronological age X 100. Today, "intelligence quotients" are expressed as "deviation IQs." Deviation IQs are based on the difference between a person's score and the average score for persons of the same age.

KKKK

KNOWLEDGE: The first level of Bloom's taxonomy. Knowledge involves students recalling information such as names, dates, events, places, and major ideas.

LLLL

LEARNING STYLE: A student's preference for a mode of learning and/or a type of learning environment (i.e., a student could favor auditory learning in an independent learning environment).

MMMM

MANDATED PROGRAM: A legally required program or action authorized by law.

MEAN: The average of a set of scores.

MEDIAN: The middle score in a set of ranked scores; half of the scores fall above the median and half fall below.

MENTOR: Matching a student on a one-to-one basis with an adult member of the community or older student who can provide expertise and/or advise in a field of study or other community endeavor. Mentors may serve as instructors for talented students and are well-trained in the subject matter considerably beyond what they are expected to teach. Typically, mentors work with only one or two students at a time. They present new information to students rather than reviewing already-studied material the way a tutor would. Mentors help their students (sometimes called "mentees") to move through material at a challenging pace. Mentors not only present new information to students, they also clarify and extend the material to be learned. The goal of mentoring is to help students learn self-teaching skills, not to spoon-feed them information.

MIND BENDER: A logical thinking activity that uses a grid as an aid in solving logic problems.

MODE: The most frequently occurring score in a set of scores.

MODELING: The emulation of the feelings or behaviors of one individual by another.

MORPHOLOGICAL ANALYSIS: A systematic creative problem-solving strategy that uses a matrix to organize, and forces associations between the component parts of a problem in an attempt to produce a novel solution idea.

MOTIVATION: An individual's level of desire to perform a specific task.

NNNN

NCE: A kind of score reported on some tests. NCE means Normal Curve Equivalent. The NCE has a mean of 50, a standard deviation of 21.06, and a range of 1 to 99. Unfortunately, NCE has a ceiling and it is impossible to distinguish among students scoring in the tops of scales.

NOMINATION: A referral process for consideration of a student for a specialized or categorical program such as a gifted program or one of its options.

NON-TRADITIONAL IDENTIFICATION: An alternate means of identification using instruments and procedures that provide an assessment of students that is not norm-referenced or standardized.

NORM GROUP: See NORM SAMPLE.

NORM SAMPLE: When tests are developed, they are given to large numbers of students (tens or hundreds of thousands of people in the case of most achievement tests). This group

comprises the norm group. Later, when individual students are tested, their performance can be compared to that of the first group of students. The individual can be said to be average, above-average, or below-average when compared to the norm group.

NORM-REFERENCED TESTS: A test used to determine an individual's status with respect to the performance of other individuals on that test. A "norm" group is the large number of examinees who have taken a particular test and whose scores form the basis of the norms. Interpretations of such a test may be based on national comparisons (norms), state norms, or local norms. At every level of education test usage, it is necessary to match the scope of the test with the purpose that the test is supposed to perform.

QQQQ

OPEN-ENDED QUESTION: Provides opportunities for more than one "right" solution or answer. Students' response is judged by the logic by which the response is explained or defended. Students must be able to recognize tasks without a label, draw upon prior knowledge, generate relevant approaches on their own, and articulate their reasoning.

ORIGINALITY: Producing original (unique) ideas or products.

OVERACHIEVER: A child who is thought to be performing above his or her intellectual potential. There is no such thing as an overachiever. This term is to be avoided when describing students; it is a derogatory judgement of the child's effort and potential.

PPPP

PEER GROUPING: A practice which indicates voluntary or assigned matching of students by shared characteristics such as age, ability, need, and/or interest, in order to affect teaching and learning.

PENTOMINOES: A set of puzzle pieces made up of shapes constructed of five squares with at least one side in common with another square.

PERCENTILE RANK: Allows the student's score on a test to be compared to other children who have also taken the test. An average score on a test yields a percentile rank of 50, meaning that the child scores higher than 50 percent of the children in the comparison group. Talented children tend to score in the top 5 percent to 10 percent when compared to children their own age.

PIGGYBACKING: See HITCHHIKING.

POOL OF NOMINEES: See TALENT POOL.

PORTFOLIO ASSESSMENT: A collection of student products used to measure student progress and achievement. It is often used to evaluate abilities to determine the appropriateness of placement in a program such as visual and performing arts. This practice allows students to demonstrate a wide variety of abilities and talents that traditionally are not measured well by standardized tests. Materials in a portfolio may be student-selected. (See also AUTHENTIC ASSESSMENT.)

PRECOCIOUS: Showing exceptionally early development. For example, a precocious mathematics students may multiply and divide at the age of four.

PRODIGY: An exceptionally talented youngster who performs adult-level accomplishments at a young age.

PSYCHOLOGICAL ASSESSMENT: Provides information about a student when compared to others of the same age. Psychological assessments can include intelligence testing, personality profiles, and information about social and emotional maturity and adjustment.

PULLOUT PROGRAM: A program in the school where able children leave their regular classrooms to come to differentiated classes taught by a specially trained resource teacher for a specified time.

RRRR

REGRESSION TOWARD THE MEAN: A curiosity of testing in which extreme scores tend to move towards the average score of the group on subsequent tests. (i.e., When a group of students is found due to their very high scores on a test, and a second test is given sometime later – even if no instruction has occurred in between – their average scores on the second test will be lower than on the first. If there was instruction between tests, the regression effect can mask the positive impact of the program. Regression effects also occur when looking at individuals selected because of high scores on one measure (such as IQ) and then looking at some other measure (such as achievement or creativity); the second measure will tend to be lower than the first).

RELIABILITY: The consistency or repeatability of a score. Reliability is the ability of a test to produce similar results on tests, or it is the agreement of observers, or the consistency of relationships between measures.

RESOURCE ROOM: A place in the child's home or school where special program services are provided.

RESULTS-BASED EDUCATION: A movement to measure success of a program or in a class not only by tests or completing a certain number of clock hours, but by meeting certain performance standards.

RISK TAKER: A person not afraid of failure, willing to take chances in order to learn new things.

SSSS

SAI: A standardized score with a mean of 100 and a standard deviation of 16 (15 in some tests). A score of 100 is an average score. A 116 is one standard deviation above the mean; the student has scored higher than about 83 percent of all students who took the test. A 132 is two standard deviations above the mean; the student has scored higher than about 97 percent of all students who took the test. A 148 is three standard deviations above the mean; the student has scored higher than about 99 percent of all students who took the test.

SCAMPER: A checklist technique used as a strategy for increasing the production of original ideas in creative problem solving. The letters of SCAMPER stand for changing something by Substituting, Combining, Adapting, Modifying (or Magnifying or Minifying), Putting to new uses, Eliminating, and Rearranging.

SCHOOL OF CHOICE: Opportunities for parents and students to select a school of attendance. Choice is fundamental to the voucher system.

SITE-BASED MANAGEMENT: A current school restructuring model by which local autonomy is given to schools for planning and decision making. Also known as school-based management. A team of educators and community members assume responsibility for all education programs in a school, striving to assist all students to reach their fullest potential.

STANDARD DEVIATION: A measure of how widely spread out a set of scores are. In a normal distribution, 68 percent of all scores fall between one standard deviation above the mean and one standard deviation below the mean. At two standard deviations above the mean, a child's score is higher than 98 percent of all scores (e.g., IQ on WISC-R of 130). At three standard deviations above the mean, a child's score is higher than 99.9 percent of all scores (e.g., IQ on the WISC-R of 145).

STANDARD SCORES: Transformations of raw test scores into scores which can be used to directly compare different kinds of tests. Scholastic Aptitude Test (SAT) scores are an example of standard scores. SAT scores have a mean of 500 and a standard deviation of 100.

STANDARDIZED TESTS: See NORM-REFERENCED TESTS.

STANINES: A condensation of the phrase "standard nine-point scale." The range of percentile scores from 1 to 99 are divided into nine sections. The average stanine is 5 and a standard deviation is about 2. Stanines tend to play down small differences in scores and focus on variations that are big enough to fall into distinct categories. A stanine score does not stand for a single point, but for a range of scores; e.g., a score of 8 indicates the range from 7.5 to 8.5.

SUNSET: A legislative term indicating the stated procedure and date for continuation or termination of a categorical program.

SYNECTICS: The use of metaphors, similes, and analogies to produce original ideas. It is a useful creative problems-solving strategy.

SYNTHESIS: The fifth of the six levels of Bloom's taxonomy. Synthesis involves putting parts together to form a new whole; to combine "given" into a new or original creation, formulate new patterns, structures, or ideas.

TTTT

TAGT: The Texas Association for the Gifted and Talented. TAGT is the nation's largest state advocacy group. It was chartered in 1978 and provides nearly 7,500 members an opportunity to exchange ideas and information about education of the gifted.

TALENT POOL: The group of students who may be eligible to be in a gifted program and from whom final selections will be made. In some gifted programs, the talent pool refers to the group of students who receive special services.

TEA: The Texas Education Agency. This is the state agency charged with carrying out the legislators' mandates in education. TEA has a Gifted and Talented Division.

TEXAS ACADEMY OF MATHEMATICS AND SCIENCE (TAMS): TAMS is a two-year, early admissions program at the University of North Texas that gives students who are particularly talented in science and mathematics a chance to complete their last two years of high school and first two years of college simultaneously.

TEXAS UNIVERSITY NETWORK OF EDUCATORS OF THE GIFTED: An organization of professionals from institutions of higher education in Texas who train teachers and parents, and conduct research into understanding and serving the needs of gifted and talented children. The Network collaborates with each other, TEA, TAGT, school systems, teachers, students, and parents.

TRACKING: Fixed groups of students that are rigidly maintained over time. Tracked students have few opportunities to move into higher-level groups despite increased performance. Tracking is *not* synonymous with grouping and is not endorsed by most gifted education advocates.

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UUUU

UNDERACHIEVER: A child whose academic performance is below the level expected, based on age, grade, aptitude, achievement test scores, or potential. Underachievement is a learned behavior. Its causes may be social, emotional, or academic.

VVVV

VALIDITY: Exists when a test measures what it says it measures. Validity does not refer to a test but to how the results of a test are used and interpreted.

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Feldhusen, J. F., VanTassel-Baska, J., & Seeley, K. (1989). *Excellence in educating the gifted.* Denver, CO: Love Publishing Company.

Feldman, D. H., & Goldsmith, L. T. (1986). *Nature's gambit: Child prodigies and the development of human potential.* New York: Basic Books, Inc., Publishers.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences.* New York: Basic Books, Inc., Publishers.

George, W. C., Cohn, S. J., & Stanley, J. C. (Eds.). (1980). *Educating the gifted: Acceleration and enrichment.* Baltimore: The Johns Hopkins University Press.

Goertzel, V., & Goertzel, M. (1962). *Cradles of eminence.* Boston: Little Brown and Co.

Goertzel, M. G., Goertzel, V., & Goertzel, T. G. (1978). *300 eminent personalities.* San Francisco: Jossey-Bass. Gross, M. U. M. (1993). Exceptionally gifted children. New York: Routledge.

Halsted, J. (1988). *Guiding gifted readers.* Columbus, OH: Ohio Psychological Publishing Company.

Horowitz, F. D., & O'Brien, M. (Eds.) (1985). *The gifted and talented: Developmental perspectives.* Washington, DC: American Psychological Association.

Kerr, B. A. (1985). *Smart girls, gifted women.* Columbus, OH: Ohio Psychology Publishing Company.

Renzulli, J. S. (1977). *The enrichment triad model: A guide for developing defensible programs for the gifted and talented.* Mansfield Center, CT: Creative Learning Press, Inc.

Renzulli, J. S., Reis, S. M., & Smith, L. H. (1981). *The revolving door identification model.* Mansfield Center, CT: Creative Learning Press, Inc.

Richardson, W. B., & Feldhusen, J. F. (1984). *Leadership education: Developing skills for youth.* New York: Trillium Press.

Rimm, S. B. (1986). *Underachievement syndrome, causes and cures.* Watertown, WI: Apple Publishing Company.

Rimm, S. B. (1990). *How to parent so children will learn.* Watertown, WI: Apple Publishing Company.

Silverman, L. K. (Ed.) (1993). *Counseling the gifted and talented.* Denver, CO: Love Publishing Company.

Smutny, J. F., Veenker, K., & Veenker, S. (1989). *Your gifted child: How to recognise and develop the special talents in your child from birth to age seven.* New York: Facts on File.

Sternberg, R. J., & Davidson, J. E. (Eds.). (1986). *Conceptions of giftedness.* New York: Cambridge University Press.

Tannenbaum, A. J. (1983). *Gifted children, psychological and educational perspectives.* New York: Macmillan.

Terman, L. M. (1925). *Genetic studies of genius, Volume I, Mental and physical traits of a thousand gifted children.* Stanford, CA: Stanford University Press.

Webb, J. T., Meckerstroth, E. A., & Tolan, S. S. (1982). *Guiding the gifted child.* Columbus, OH: Psychology Publishing Company.

Whitmore, J. R., (1980). *Giftedness, conflict, and underachievement.* Boston: Allyn & Bacon.

Defining and understanding acceleration and its history

Daniel, N., & Cox, J. (1988). *Flexible pacing for able learners.* Reston, VA: Council for Exceptional Children, ERIC Clearinghouse.

The authors call for a flexible set of program options to meet the needs of gifted students including acceleration. They include descriptions of specific schools offering these options.

Daurio, S.P. (1979). Educational enrichment verses acceleration: A review of the literature. In W.C. George, S.J. Cohn, and J.C. Stanley (Eds.) *Educating the gifted.* Baltimore, MD: the John Hopkins University Press.

This chapter should be read by anyone studying or dealing with the topic of acceleration. Daurio's review of the literature prior to 1979 is often cited; it is comprehensive and provides many insights into the relative merits of acceleration and enrichment.

Elkind, D. (1988). Mental acceleration. *Journal for the Education of the Gifted*, 11(4), 19-31.

Elkind, D. (1988). Acceleration. *Young Children*, 43(4), 2.

Elkind has often been cited by school administrators when they are arguing against allowing students to accelerate. Actually, Elkind is in favor of matching students curricular placement with their ability levels. His only objection is to the term acceleration which may carry the connotation that developmental processes can be accelerated.

Feldhusen, J.F. (1989). Synthesis of research on gifted youth. *Educational Leadership*, 46, 6-11.

A clear, easily understood summary of much of the important research in the field of gifted education. Feldhusen notes that acceleration is a misnomer, instead students are placed at appropriate educational levels.

Howley, A., Howley, C.B., and Pendarvis, E.D. (1986). *Teaching gifted children: Principles and strategies*. Boston: Little, Brown, and Company. (pages 135-165)

A very readable chapter on acceleration of gifted students. It includes ideas and suggestions for teachers, administrators, and parents.

Howley, C.B. (1987). It's controversial, but 'acceleration' could bring gifted kids up to full speed. *The American School Board Journal*, 174(6), 32-33,40.

A short commentary addressed to school board members. Look it over if you want ideas and approaches for dealing with this group.

Kulik, J.A. & Kulik, C.L. (October, 1984). Synthesis of research on effects of accelerated instruction. *Educational Leadership*, 84-89.

This is a very important work. It is a major synthesis of the research on acceleration using a technique called meta-analysis. Meta-analysis allowed the authors to combine numerous investigations of the effects of acceleration. The results show that acceleration has a very positive effect on the academic growth of the accelerants.

Robinson, H.B. (1983). A case for radical acceleration: Programs of the Johns Hopkins University and University of Washington. In C.P. Benbow & J.C. Stanley (Eds.), *Academic Precocity* (pp. 139-159) Baltimore, MD: Johns Hopkins University Press.

Robinson presents common arguments for and against acceleration. He shares experiences from two early college entrance programs to support the need for acceleration for some students.

VanTassel-Baska, J. (1986). Acceleration. In C.J. Maker (Ed.) *Critical issues in gifted education: Defensible programs for the gifted* (pp 179-196), Rockerville, MD: Aspen Systems.

Four major areas associated with acceleration are reviewed: (1) synthesis of the research literature, (2) descriptions of the types of acceleration possible, (3 causes for the lack of accelerative options in schools today, and (4) recommendations for decision makers when considering acceleration.

Early School Entrance

Proctor, T.B., Black, K.N., & Feldhusen, J.F. (1986). Early admission of selected children to elementary school: a review of the research literature. *Journal of Educational Research*, 89, 70-76.

This article would be useful to someone wanting to review the literature or to establish a collection of research evidence relating to early school entrance.

Proctor, T.B., Feldhusen, J.F., & Black, K.N. (1988). Guidelines for early admission to elementary school. *Psychology in the Schools*, 25(1), 41-43.

The authors point out the advantages of early entrance for appropriate students and provide 12 specific guidelines for making decisions regarding early entrance to school.

Social and Emotional Issues Associated with Acceleration

Janos, P.M., & Robinson, N.M. (1985). Psychosocial development in intellectually gifted children. In F.D. Horowitz & M. O'Brien (Eds.), *The gifted and talented: Developmental perspectives* (pp. 149-196). Washington, DC: American Psychological Association.

A comprehensive review of the literature on the social and emotional development of gifted students which concludes that contrary to the opinions of some, gifted children are social and emotionally well developed.

Richardson, T.M., & Benbow, C.P. (1990). Long-term effects of acceleration on the social-emotional adjustment of mathematically precocious youths. *Journal of Educational Psychology*, 82(3), 464-470.

Long term effects are often cited by those opposed to acceleration. In this study, over 1000 mathematically gifted youth identified in middle school, were surveyed as 23 year olds. Some of the students were accelerated and others were not. Acceleration was not harmful but slightly beneficial to the students.

Robinson, N.M. & Janos, P.M. (1986). Psychological adjustment in a college- level program of marked academic acceleration. *Journal of Youth and Adolescence*, 15(1), 51-60.

The authors studied the psychosocial adjustment of radically accelerated early college entrants, equally bright age peers who did not accelerate, regular-aged university students matched on ability, and highly selective National Merit Scholars. The accelerants were as well adjusted as all comparison groups.

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SECTION IV: WHAT RESOURCES EXIST FOR UNDERSTANDING AND HELPING GIFTED AND TALENTED CHILDREN?

Objections to Acceleration or Doubts Expressed By School Officials and Parents

Daurio, S.P. (1979). Educational enrichment verses acceleration: A review of the literature. In W.C. George, S.J. Cohn, and J.C. Stanley (Eds.) *Educating the gifted*. Baltimore, MD: the John Hopkins University Press.

Daurio presents the arguments often made in opposition to acceleration. He then reviews the literature to show how these fears are ungrounded and are often based on preconceived notions and irrational objections.

Jackson, N.E., Famigietti, J., & Robinson, H.B. (1981). Kindergarten and first grade teachers' attitudes toward early entrants, intellectually advanced students, and average students. *Journal for the Education of the Gifted*, 4(2), 133-141.

Kindergarten teachers were found to be biased against early entrants; first grade teachers were slightly more supportive. The research confirms earlier observations that elementary teachers regard maturity and interpersonal skills as most important qualities in an individual's eventual success in life.and consequently oppose acceleration based on social skills questions.

Levine, N.S. (1986). Comments on "Acceleration". In C.J. Maker (Ed.) *Critical issues in gifted education: Defensible programs for the gifted* (pp 197-208), Rockerville, MD: Aspen Systems.

In this chapter, the idea of acceleration is accepted, although somewhat reluctantly. Mr. Levin, a school practitioner, raises concerns about the lack of creativity training and enrichment he believes is associated with acceleration. He raises issues often raised by opponents to acceleration.

Southern, T.W., Jones, E.D., & Fiscus, E.D. (1989). Practitioner objections to the academic acceleration of gifted children. *Gifted Child Quarterly*, 33(1), 29-35.

The authors study of school personnel (elementary teachers, coordinators of gifted programs, elementary principals, and school psychologists) revealed that all groups viewed acceleration as potentially harmful for young children. They thought the students were academically ready and would benefit from acceleration but were concerned about social adjustment problems.

Grade or Subject Acceleration

Daurio, S.P. (1979). Educational enrichment verses acceleration: A review of the literature. In W.C. George, S.J. Cohn, and J.C. Stanley (Eds.) *Educating the gifted*. Baltimore, MD: the John Hopkins University Press.

The author reviews all forms of acceleration including grade skipping and content acceleration.

Feldhusen, J.F., Proctor, T.B., & Black, K.N. (1986). Guidelines for grade advancement of precocious children. *Roeper Review*, 9(1), 25-27.

If grade acceleration is being considered this article provides specific guidance about making the acceleration decision.

Parents' Experiences of Accelerants and Case Histories

Grost, A. (1970). *Genius in residence*. Englewood Cliffs, NJ: Prentice Hall.

An interesting history by the parent of an extremely gifted boy.

Howley, C.B., & Howley, A.A. (1985). A personal record: Is acceleration worth the effort? *Roeper Review*, 8(1), 43-45.

This family struggled with acceleration and school personnel in several districts. Their experiences can be helpful to parents considering acceleration as an option

Sharkey, O. (1987). Tony Lai, age 14, B.SC. prodigy. *Roeper Review*, 10(2),94-96.

The experiences of a bright young boy in Canada are explored.

Early College Entrance

Brody, L.E. & Benbow, C.P. (1987). Accelerative strategies: How effective are they for the gifted? *Gifted Child Quarterly*, 32,(3), 105-110.

The study investigated the academic, extracurricular,and social/emotional adjustment of gifted students. Some students skipped grades, others were accelerated in specific subjects, and some experienced no acceleration. No harmful effects were found for the accelerated groups in any area.

Brody, L.E., & Stanley, J.C. (1991). Young college students: Assessing factors that contribute to success. In W. Southern and E. Jones (Eds.) *Academic acceleration of gifted children*. New York: Teachers College Press.

A most authoritative and comprehensive review of the literature and experiences regarding early college entrance. Guidelines are provided for making the decision to accelerate.

Janos, P.M., Robinson, N.M., & Lunneborg, C.E. (1989). Markedly early entrance to college. *Journal of Higher Education*, 60, 495-518.

A comparison of early college entrants and two groups of regular aged college students. The accelerants had higher ability scores and grades and were generally quite successful.

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Grouping and gifted children: Support for those debating grouping issues

Allan, S.D. (1991). Ability-grouping research reviews: What do they say about grouping and the gifted? *Educational Leadership*, 48(6), 60-65.

Allan reviews the meta-analyses of Kulik and Kulik (1990) and Slavin (1990) and offers recommendations for making good decisions about grouping. She points out the common misinterpretations of Slavin's research with regard to the success of grouping practices.

Benbow, C.P., & Arjmand, O. (1990). Predictors of high achievement in mathematics and science by mathematically talented students: A longitudinal study. *Journal of Educational Psychology*, 82(3), 430-441.

Will gifted students make it even if they are not grouped for high-level instruction? This study that suggests all talented students will not be successful. The biggest difference between successful and unsuccessful post-college students was that the successful students had more high-level math science experiences than did the unsuccessful students.

Feldhusen, J.F., & Moon, S.M. (1992). Grouping gifted students: Issues and Concerns. *Gifted Child Quarterly*, 36(2), 63-67.

Individuals looking for a clear but comprehensive review of the issues surrounding grouping for gifted students should read this article. While not reporting original research, it makes numerous excellent observations about grouping and the research that has been done by others that favor and oppose grouping.

Gallagher, J.J. (1992). When ability grouping makes good sense. *Education Week*, October 28, page 24.

This editorial by a leader in special and gifted education explores and offers answers to the questions posted by critics of grouping.

Kulik, J. A., & Kulik, C.C. (1991). Ability grouping and gifted students. In N. Colangelo and G. Davis, (Eds.) *Handbook of gifted education* (pp. 178-196). Boston: Allyn and Bacon.

This chapter represents the best meta-analytic synthesis of grouping data available. It specifically reviews research on the effect of grouping for gifted students. The Kuliks have also reported their research work in earlier articles:

Kulik, J. A., & Kulik, C.C. (1987). Effects of ability grouping on student achievement. *Equity and Excellence*, 23(1-2), 22-28.

Kulik, J. A., & Kulik, C.C. (1987). In defense of tracking. *Educational Leadership*, 44(6), 24-26.

Mills, C.J., & Durden, W.G. (1992). Cooperative learning and ability grouping: An issue of choice. *Gifted Child Quarterly*, 36(1), 11-16.

Cooperative learning and ability grouping are often seen as mutually exclusive opposites. Mills and Durden's article clarifies the issue by pointing out the appropriate uses of each approach.

Oakes, J. (1985). *Keeping track, how schools structure inequality*. New Haven, CT: Yale University Press.

Oakes, J. (1990). *Multiplying inequalities, the effects of race, social class, and tracking on opportunities to learn mathematics and science*. Santa Monica, CA: Rand Corp.

Oakes is often cited as a source of evidence against grouping. Her work is based on a subjective synthesis of research rather than an objective review of all relevant studies. She does not base her arguments on the instructional needs of children, rather she argues that tracking is a cultural device that holds some groups (typically the poor and minorities) back without offering any particular benefit to others (higher ability students).

Rogers, K. (1991). *The relationship of grouping practices to the education of the gifted and talented learner*. Stoors, CT: National Research Center on the Gifted and Talented.

Rogers reviews the various studies of grouping for the gifted and makes six recommendations for ability grouping of gifted students.

Schunk, D. (1987). Peer models and children's behavior change. *Review of Educational Research*, 57, 149-174.

Opponents of grouping often claim average and lower ability students need gifted students in their classes as role models. These individuals claim it is the responsibility of the best students to show the others how to respond and work. Is there any empirical support for the belief that lower-ability students model behavior on higher-ability students? Not according to Schunk's research. Lower-ability students look to other lower-ability students who are coping with school as their role models not to the higher-ability students whose ease of performance is far removed from the experiences of the lower-ability child.

Slavin, R.E. (1988). Synthesis of research on grouping in elementary and secondary schools. *Educational Leadership*, 46(1), 67-77.

Slavin work is often cited as evidence against ability grouping. Informed readers should know that his "best-evidence" has been criticized for its subjectivity and lack of rigor in synthesizing research (as opposed to meta-analyses as used by Kulik and Kulik). His synthesis suggests that grouping is not effective, but he has excluded all studies that involve grouping gifted students together and studies where instruction was changed. His research shows that if schools group students in high, average and low tracks, but do not change instructional strategies or accelerate instruction, grouping will be unsuccessful.

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Other "best-evidence" research study by Slavin:

Slavin, R.E. (1990). Achievement effects of ability grouping in secondary schools: A best-evidence synthesis. *Review of Educational Research*, 60(3), 471-499.

Gutiérrez, R., & Slavin, R.E. (1992). Achievement effects of the nongraded elementary school: A best evidence synthesis. *Review of Educational Research*, 62(4), 333-376.

Also see the debate on grouping in the Journal for the Education of the Gifted between Slavin and Robinson for a clear discussion of the merits of cooperative learning and grouping.

Robinson, A. (1990). Cooperation or exploitation? the argument against cooperative learning for talented students. *Journal for the Education of the Gifted*, 14(1), 9-27.

Slavin, R.E. (1990). Response to Robinson: Cooperative learning and the gifted: Who benefits? *Journal for the Education of the Gifted*, 14(1), 28-30.

THE HIGHLY GIFTED

Defining and understanding the highly gifted

Feldman, D.H. (1984). A follow up of subjects scoring above 180 IQ in Terman's "Genetic Studies of Genius." *Exceptional Children*, 50 (6), 518-623.

This study compares the 26 Terman subjects who had greater than 180 IQ with 26 randomly selected subjects from Terman's sample to see what differences were exhibited between the moderately and highly gifted groups. Results showed the differences in adult life styles were not as pronounced as one might have expected.

Feldman, D.H. (1987). Extreme giftedness: A bit less mysterious – an editorial. *Roeper Review*, 10(2), 72-74.

This editorial discusses the definitions of moderate and extreme giftedness, as well as the use of the term "genius."

Feldman, D.H. & Goldsmith, L.T. (1986). *Nature's Gambit: Child Prodigies and the Development of Human Potential*. New York: Basic Books. UNT: BF 723.G6 F43

This book outlines case studies of six child prodigies in areas of chess, music, writing, math, and language. It includes discussions of factors involved – families, teachers, social, and emotional issues.

Goldsmith, L.T. (1987). Girl prodigies: Some evidence and some speculation. *Roeper Review*, 10(2), 74-82.

This article differentiates between the highly precocious and the true child prodigy. It also discusses the environment conducive to the development of a prodigy.

Hermann, K.E. (Nov/Dec, 1982). Publicity and the prodigy. *G/C/T*, 35, 60-61.

This article spells out several benefits and negatives concerning the publicizing of a child prodigy's talents.

Howe, M.J.A. (1990). *The Origins of Exceptional Ability*. Cambridge, MA: Basil Blackwell. UNT: BF723.G5 H68.

This book provides a historical look at many well-known prodigies as well as other individuals with superior achievements. It includes family backgrounds, case studies, motivational factors, and parental support.

Keating, D.P. (Ed.). (1976). *Intellectual Talent: Research and Development*. Baltimore: Johns Hopkins University Press. UNT: QA 11 .A1 H95

This book includes a collection of articles which explore identification, programming, and the psychology of intellectual talent, plus a general discussion by the symposium participants.

Leyden, S. (1985). *Helping the Child of Exceptional Talent*. London: Croom Helm. UNT: LC 3993.L43

This is a book for both teachers and parents who want more understanding about giftedness and how it effects a child's progress and relationships. It presents the author's view of implications for the child, family, and school. It is easy to read, and would be good to recommend to parents of highly gifted children.

Powell, P.M. & Haden, T. (1984). The intellectual and psychological nature of extreme giftedness. *Roeper Review*, 6(3), 131-133.

This article compares characteristics and intellectual performance of highly gifted to moderately gifted and average intelligence. It also discusses psychosocial aspects (self esteem and self conception) of the highly gifted.

Roedell, W.C. (1984). Vulnerabilities of highly gifted children. *Roeper Review*, 6(3), 127-130.

This article addresses differences between moderately and highly gifted children. Discussed are areas of uneven development, perfectionism, adult expectations, intense sensitivity, self-definition, alienation, and role conflict.

Powell, P.M. (1987). Genius. Roeper Review, 10(2), 96-100.

The author attempts to define the term "genius," reviewing six conceptions over history. The author also compares analytic, synthetic, and integrated genius.

Robinson, N. (1987). The early development of precocity. *Gifted Child Quarterly*, 31(4), 161-164.

This article discusses the highly gifted individuals in the areas of description, identification, prediction of later attainments from early behaviors, studies of origins of high commitments and high achievement motivation, and also naturalistic and experimental studies of the nurturance of exceptional abilities.

Subotnik, R.F., Karp, D.E. & Morgan, E.R. (1989). High IQ children at midlife: An investigation into the generalizability of Terman's genetic studies of genius. *Roeper Review*, 11(3), 139-144.

The author compares Terman subjects with similar subjects from a different generation and region, but from similar socioeconomic backgrounds. Results showed a similar profile of productive professionals with good mental and physical health, and stable interpersonal relationships. The major difference noted was in the women's societal roles and occupational opportunities.

Walberg, H.J. (1981). Childhood traits and environmental conditions of highly eminent adults. *Gifted Child Quarterly*, 25(3), 103-107.

This research reviewed common psychological traits of over 200 eminent men from the 14th century to the present, and compared their results to those of similar studies. Their findings agreed with the earlier research conducted by Goertzals and Goertzals.

Family perspectives of highly gifted children

Felder, R.M. (1986). Identifying and dealing with exceptionally gifted children: The half-blind leading the sighted. *Roeper Review*, 8(3), 174-177.

This author, a college professor, explains the problems he had getting his highly gifted children the proper educational opportunities. He offers several practical suggestions to parents who are having similar problems.

Gross, M. (1986). Radical acceleration in Australia: Terence Tao. *Gifted Child Today*, 9(4).

This article highlights the life and family support of a remarkably gifted math students in Australia. The family's nurturant rather than creator style of support is stressed.

Hermann, K.E. (Sept/Oct, 1981). Genius: The onus of precocity. *G/C/T*, 28, 53-54.

The author, a highly gifted individual who completed college before age 18, shares a personal viewpoint about being labeled a "genius." He suggests that great care be used in referring to a highly gifted child as a "genius," because it can lead to a distorted sense of self and a possibility of the development of perfectionist traits.

Howley, C.B. & Howley, A.A. (1985). A Personal Record: Is acceleration worth the effort? *Roeper Review*, (8)1, 43-45.

This parental perspective was written by two education professors who are also parents of gifted children. The article chronicles their attempts to get school districts to provide acceleration for their children in order to provide academic challenge.

Lainbow, R. (Sept/Oct, 1981). An open letter to the parents of extremely gifted youngsters. *G/C/T*, 28, 23-25.

Parents of a highly intelligent child offer suggestions to other parents bout setting up a network of contact and supports, resources and ideas, people and experiences.

Moore, N.D. (1985). The profess and problems of an incredibly talented brother and sister. *Roeper Review*, (8)2, 109-112.

This case study traces the early education of a brother and sister who were both identified by SMPY as highly gifted in math. It also shares the parents's concerns that the school system did not meet their children's needs.

Sharkey, O.C. (1987). Tony Lai, age 14, B.SC. prodigy, *Roeper Review*, 10(2), 94-96.

The importance of the individual's role in this own development and how caretakers can support this effort are explored in this article about a highly gifted young man who graduated from college before he was 15. Emphasis is placed on finding educational placements that will allow the child to receive the appropriate educational challenges.

Tolen, S. (1982), An open letter to parents, teachers, and others: From parents of an exceptionally gifted child. In Webb, J.T., Meckstroth, E.A. and Tolen, S. *Guiding the gifted child* (pp. 221-241). Columbus, OH: Ohio Psychology Publishing.

This chapter from a book for parents of gifted children explains the background, testing, and school experiences of two very gifted children. It is written by the mother of one of the children, and would be helpful reading for any parent of a highly gifted child.

Programming alternatives for highly gifted children

Brody, L.E. & Benbow, C.P. (1987). Acceleration strategies: How effective are they for the gifted? *Gifted Child Quarterly*, 31 (3), 105-109.

This study investigated the relationship between acceleration (grade skipping, subject acceleration), and academic achievement, extracurricular activities, and social/emotional adjustment. No harmful effects were noted as a result of the acceleration.

Brown, M.M. (1984). The needs and potentials of the highly gifted: Toward a model of responsiveness. *Roeper Review*, 6(3), 123-126.

This article discusses the special needs of the highly gifted in educational programming because of the special ways these children think, act, and feel.

Comer, R. (1989). A mentorship program for gifted students. *The School Counselor*, 36, 224-229.

This article addresses the value of mentoring for gifted students. It briefly traces the history of mentorships, then explores the rationale for using the program, gives suggestions for implementing mentorships, and explains how such a program worked in a Kokomo, Indiana junior-senior high school.

Feldhusen, J.F. (1989). Synthesis of research on gifted youth. *Educational Leadership*, 46(6), 6-11.

Feldhusen provides a summary of much of the important research in the area of gifted education. Concerning acceleration as an option, he maintains that it is really a process of providing gifted children a suitable level of instruction that is commensurate with their achievement levels and readiness so that they'll be sufficiently challenged to learn new materials.

George, W.B., Cohn, S.J. & Stanley, J.C. (Eds.). (1979). *Educating the Gifted: Acceleration and Enrichment*. Baltimore: Johns Hopkins University Press. UNT: LC 3992 H95

This collection of articles explore programming alternatives for gifted students. It provides informational data and a discussion of the relative merits of both acceleration and enrichment, and who might benefit from each.

Kulik, J.A. & Kulik, C.C. (1984). Synthesis of research on effects of accelerated instruction. *Educational Leadership*, 42(2), 84-89.

This articles is major synthesis of the research on acceleration using meta-analysis. The results indicate that acceleration has a very positive effect on the academic growth of the children who were accelerated.

Lewis, G. (1984). Alternatives to acceleration for the highly gifted child. *Roeper Review*, 6(3), 133-138.

This article presents case studies of two highly gifted preschoolers, It suggests that linear acceleration for such students is usually not adequate, and that three components – assessment, flexibility of scheduling, and counseling – are important for program success.

Thompson, G.B. (1987). An experimental program for highly gifted children in the early primary grades. *Gifted Child Quarterly*, 31(1), 34-36.

This article explains a program for six- and seven-year-olds that combined allowing the students time to be with their intellectual peers in a learning center and individual, independent study in their regular classrooms. The author believes that a gifted program that is suitable for the moderately gifted child will not meet the needs of the highly gifted.

Children who are highly gifted in mathematics

Bennow, C.P. & Stanley, J.C. (Eds.). (1983). *Academic Precocity: Aspects of its Development*. Baltimore: Johns Hopkins University Press.

This is a compilation of articles concerning mathematical precocious students, including characteristics, programming possibilities emphasizing acceleration, and effects of such acceleration on students.

Brody, L. (November, 1989). *Characteristics of extremely mathematically talented females*. Paper presented at the meeting of the National Association for Gifted Children Conference, Cincinnati, OH.

This paper reported that the females who qualified for SMPY were predominantly of Asian heritage, had mothers who did not work outside the home, but whose parents often both held Ph.D. degrees.

Lupkowski, A.E., Assouline, S.G. & Stanley, J.C. Applying a mentor model for mathematically talented students. *Gifted Child Today*, 13(2), 15-19.

This article summarizes the use of the Diagnostic Testing–Prescriptive Instruction (DT-PI) with elementary highly talented math students. It also explains the use of a mentor in such a program and how the DT-PI approach can fit in a child's regular school situation.

Richardson, T.M. & Benbow, C.P. (1990). Long term effects of acceleration on the social-emotional adjustment of mathematically precocious youths. *Journal of Educational Psychology*, 82(3), 464-470.

These researchers assessed the social development of the SMPY students who accelerated, compared with that of qualified students who did not accelerate. Positive results support acceleration as a viable alternative for the highly gifted math student.

Stanley, J.C. (1984). The exceptionally talented. *Roeper Review*, 6(3), 160.

This is a quick summary of Stanley's Study of Mathematically Precocious Youth (SMPY) program, and the talent searches that are part of it.

Stanley, J.C. (1988). Some characteristics of "SMPY's 700-800 on the SAT-M before age 13 group": Youths who reason extremely well mathematically. *Gifted Child Quarterly*, 32(1), 205-209.

This research study looked at the background characteristics of 292 students who reason extremely well mathematically, who were initially identified at age 12 or less. The ratio was 12:1 in favor of boys. They either had high verbal reasoning and/or high non-verbal reasoning ability, in addition to their high math reasoning skills. Their parents were well educated, and over half were first born in their families.

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Stanley, J.C. (1991). An academic model for educating the mathematically talented. *Gifted Child Quarterly*, 35(1), 36-42.

This article traces the origin and development of a network of talent searches and math projects, beginning with the creation in 1971 of the SMPY at Johns Hopkins University. The DT-PI model, mentor paced program, and its benefits are explained.

Stanley, J.C. & Benbow, C.P. (1982). Educating mathematically precocious youth. Twelve policy recommendations. *Educational Researcher*, 11(5), 4-9.

This article summarizes SMPY's DT-PI procedures and mentor approach. Based on 13 years of work with mathematically talented students, the authors provide 12 policy recommendations concerning topics such as early identification, taking courses appropriate for ability, early college entrance, a recommendation for more research on why females tend to have less well-developed math reasoning ability, and teaching young gifted students how to study effectively.

Stanley, J.C. & Benbow, C.P. (1986). Youth who reason exceptionally well mathematically. In Sternberg, R.J. & Davidson, J.E. (Eds.), *Conceptions of Giftedness* (pp. 361-387). New York: Cambridge University Press.

The authors define mathematical precocity according to SMPY's program, discuss their rationale for using SAT scores for identification at the junior high level, explain the purposes of SMPY, why acceleration rather than enrichment is stressed, and enumerate benefits to SMPY participants.

Stanley, J.C., Lupkowski, A.E., & Assouline, S.G. Eight considerations for mathematically talented youth. *Gifted Child Today*, 12(2), 2-4.

This article provides a perspective for the practitioner to decide if an acceleration option might be the best for a student. The authors discuss enrichment vs. acceleration, and explain several factors to consider. The main focus is on how to organize a systematic accelerated curriculum, balanced with appropriate enrichment activities for those students who need both.

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Please address any comments or questions regarding this guide to TAGT or to Dr. Micheal Sayler, Department of Technology & Cognition, The University of North Texas, P. O. Box 13857, Denton, Texas 76203-6857, (817) 565-4699.

CONNIE MCLENDON
EXECUTIVE DIRECTOR